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ABSTRACT

A project was begun in 1978 to test the feasibility of a high-skill training program that would prepare welfare recipients for well-paying jobs in the private sector. The training for this specially selected Work Incentive Program (WIN) was to be provided by two Bell and Howell schools, one in Columbus, Ohio, and the other in Chicago. Training consisted of a two-year program for electronics technicians. The WIN women who entered the program were older, usually black, heads of households, and academically weaker than the school's usual young, white, male students. Special counselors, tutoring, child care, and allowances were provided for the students selected. The program was evaluated after five years, comparing the specially selected WIN group with a regular short-term WIN training group. It was found that 53 of the women in the special group (29 percent) graduated--not much lower than the schools' graduation rate for regular students. However, the academic difficulties and personal problems that were largely responsible for the high dropout rate also affected the progress of those who managed to graduate; most graduated in more than two years. Employment information was obtained from graduates, dropouts, and comparison group members at two points in their careers. Following graduation, 34 (71 percent) of the WIN clients were successful in obtaining employment. Those who did find jobs were well paid; salaries averaged $12,883, considerably higher than the national average of $7,634 for women placed under the regular WIN program. However, cost-benefit analysis of the program showed that program costs were higher than either client wages or taxes paid by former clients could match, so the program received mixed ratings. (KC)

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ASSESSMENT OF A WIN QUALITY TRAINING DEMONSTRATION PROGRAM

FINAL REPORT

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and
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Foreword to the WIN Report

This report presents the final results of BSSR's evaluation of the WIN Quality Training Demonstration Project. In addition to our final analyses and recommendations, an attempt has been made to include in this report a comprehensive summary of all major activities over the life of the project. Only those interested in a very fine level of detail need to refer to the two interim reports which were issued in 1980 and 1982.

As is the case for all reports growing out of this project, the research findings represent the collective efforts of many individuals. The two senior authors of this report have been associated with this project since its inception. While at BSSR, John Weidman was responsible for developing and implementing the experimental design for this study; after he moved to the University of Pittsburgh, he continued to participate actively in all phases of the research and contributed to the drafting of this report. Richard White has had the major responsibility for the management of this project and the preparation of this report. Besides the authors, B. Katherine Swartz has made a major contribution in the planning and execution of the cost/benefit analyses and also in the study of labor market experiences. Other BSSR staff have also played important roles in the completion of project tasks and the preparation of this report. Mary Eileen Dixon and Miriam Balutis shared responsibility for instrument design and data collection and prepared Appendix B. In addition, Ms. Dixon drafted Chapter 4 of the report, which summarizes the post-training employment experiences of program graduates. Lucy Duff prepared the review of previous studies of manpower programs which is Appendix F to this report.

Other BSSR staff who made significant contributions include Janie Marinkovic who supervised the editing and data reduction tasks, and members of BSSR's computer analysis unit, in particular, Barbara Noble, the unit's manager and David Naden and Joshua Greenbaum, who carried out much of the computer analysis. David Naden also prepared a merged and reconciled hierarchical data file for the final data analyses.

Within the Employment and Training Administration, the project benefited from the guidance provided by Dr. Howard Rosen, under whose leadership this effort was initiated. Gordon Berlin contributed many ideas and research suggestions, as well as unflagging support. The continued interest of Dr. Burt Barnow, Director of the Office of Research and Development, and of Ms. Beverley Bachemin, our current project monitor, have also been essential for carrying the project this far.

Finally, the cooperation and information from Virginia Mills, National Project Coordinator for the Bell & Howell Education Group, from Ursula Haugabrok, Rose James and Michelle Williams, the counselors of the Bell & Howell Schools for WIN students in Chicago and Columbus, and from the personnel of the local WIN and SAU offices have been invaluable to the evaluation team; their reports have been a major data source for this report.

Laure Sharp
Principal Investigator

TABLE OF CONTENTS

Foreword to the WIN Report iv

List of Tables viii

Executive Summary xiii

I. RESEARCH AND EVALUATION GOALS 1
II. DESCRIPTION OF THE DEMONSTRATION PROGRAM 7
The Electronics Technician Training Program 7
Selecting The Training Institution 7
Basic Curriculum 9
Program Characteristics 10
The Schools 11
Placement Services 13
Modifications Of The Program 14
WIN Services For Training Program Participants 17
Evaluation Design 18
The Process Of Client Selection 19
Characteristics Of WIN Clients Entering Training 25
WIN Status 25
Age 27
Marital And Family Status 29
Childcare 32
Ethnic Background 32
Schooling 36
Geographic Mobility 36
Aptitude Test Scores 38
Job Histories 41
III. THE SCHOOL EXPERIENCE 43
Common Problems of Participants During the Early Months of Training Enrollment 44
Childcare 44
Transportation To Training 44
Personal Finances 45
Health 46
Problems With Public Agencies 47
Reactions Of Others To Client's Participation In The Training 49
School-related Problems 50
Problems Induced By The Program Evaluation 50
A Comparison Of Dropouts And Program Graduates 51
Demographic Characteristics 51
Education 53
Prior Work Experience 55
Public Assistance Experience 59
Family Characteristics 63
Academic Qualifications 63
Training Program Experiences 70
Experiences Outside Of School 81
Summary 81
IV. INITIAL LABOR MARKET EXPERIENCE OF PROGRAM GRADUATES 87
Initial Placement Status 87
Job Search Activities 89

Preferred Job Characteristics 91
Problems During The Job Search 93
Low Grade Point Average 94
Little Work Experience 95
Name Changes 95
Age And Sex 95
No Telephone 96
No Car Or Driver's License 96
Poor Social Skills In Interviews 96
Failure On Job Tests 97
Naivete About The Job Search Process 97
Restrictions On "Acceptable" Jobs 97
Unwillingness To Relocate 98
Predicting Successful Placements 99
Characteristics Of Initial Jobs 105
Job Titles 105
Problems In Transition From School To Work 107
Case Studies Of Selected Graduates 109
V. EMPLOYMENT STATUS OF PROGRAM GRADUATES, DROPOUTS, AND COMPARISON GROUP MEMBERS 120
Current Employment Status 121
Hourly Wages And Estimated Annual Earnings 123
WIN And AFDC Status 125
Industry And Job Titles 127
Sex-Typing Of Current Jobs 129
Employment Status Of "Ever Employed" Study Participants 129
Categorizing The Dropouts 134
Summary 135
VI. COST/BENEFIT ANALYSES 137
Limitations To The Analysis 137
Comparison Of All Participants And Comparison Group Members 145
Individual Perspective 145
From The Taxpayer's Perspective 148
From The Social Perspective 156
Cost Benefit Analyses By Site 157
From The Individual Perspective 157
From The Taxpayer's Perspective 159
From The Social Perspective 162
Graduate Versus Comparison Analysis 162
From The Individual Perspective 163
From The Taxpayer Perspective 163
From The Social Perspective 167
Conclusion 167
VII. SUMMING UP: FINDINGS AND RECOMMENDATIONS 170
1. The Drop-Out Issue 170
2. Employment Opportunities For Able AFDC Mothers 173
3. Labor Market Problems Of Program Graduates 175
4. Is High-Quality Training A Viable Option For Portions Of The AFDC Population? 179
References 182

LIST OF TABLES

Table		Page
II-1	WIN Registrant Status of Training Participants, by Site.	26
II-2	Age at the Beginning of the Study, by Site	28
II-3	Marital and Family Status of Training Participants . . .	30
II-4	How Many More Children Do You Expect to Have in Your Lifetime?.	31
II-5	What are Your Childcare Arrangements for this Child?	
II-6	How Much Do You Pay Per Week for These Childcare Arrangements, in Addition to WIN Payments?	34
II-7	Of What Racial or Ethnic Group Do You Consider Yourself a Member?	35
II-8	Schooling Completed by Training Participants	37
II-9	GATB Test Scores by Exam Type and Site, Training Participants	39
II-10	Scores on the Bell & Howell Arithmetic Test, by Site . .	40
II-11	Employment Status of Participants at Time Training Program Announced.	42
III-1	Age of Program Graduates and Dropouts.	52
III-2	Ethnic Group of Program Graduates and Dropouts	52
III-3	Years of Previous Education Completed.	54
III-4	Type of High School Program Attended	54
III-5	Previous Coursework in Mathematics and Science	56
III-6	Number of Science and Math Coursework Areas.	57
III-7	Prior Work Experience.	58
III-8	Public Assistance Experience	60
III-9	Public Assistance Status of Program Participants' Families When Growing Up	61

LIST OF TABLES--(Continues)

Table		Page
III-10	Proportion of Friends on Public Assistance.	62
III-11	Marital Status at Beginning of Program.	64
III-12	Changes in Marital Status During Program.	64
III-13	Number of Children at Start of Training Program	65
III-14	Age of Youngest Child at Start of Training Program. . .	66
III-15	Average Scores on Qualification Tests	67
III-16	Initial Enrollment in Remedial Course	69
III-17	Initial Preference for Employment or Training	69
III-18	Number of Months Enrolled in the Bell & Howell Program	71
III-19	Early Experiences in the Program Compared to Expectations.	72
III-20	Perceived Effect of Mother's Enrollment in Program on Her Children	74
III-21	Problems Encountered in Staying in the Program.	76
III-22	Importance of Sources of Support in Helping Respondents Complete Training	78
III-23	Interaction with Students Outside of School	79
III-24	Participation in Student Clubs or Student Government. .	80
III-25	Use of Own Time to Come to School Lab to Study or Do Extra Work.	80
III-26	Problems Experienced Outside of the Training Program. .	82
IV-1	Initial Job Placement of Graduates by Site.	88
IV-2	Initial Job Characteristic Preferences and the Percent of Graduates Who Felt the Jobs They Interviewed for Usually Met Each Condition.	92
IV-3	Cumulative Grade Point Average by Initial Job Placement	100

LIST OF TABLES--(Continued)

Table		Page
IV-4	Elapsed Time Enrolled in Training Program by Initial Job Placement.	101
IV-5	Continuous Months on Public Assistance by Initial Job Placement.	103
IV-6	Experience with Public Assistance as a Child by Initial Job Placement.	104
IV-7	Characteristics of Initial Jobs by Site.	106
V-1	Current Employment Status of Graduates, Dropouts and Comparison Group Members: Hours Worked Per Week, Hourly Wage, and Estimated Annual Earnings	124
V-2	WIN and AFDC Status of the Currently Employed Graduates, Dropouts, and Comparison Group Members. . .	126
V-3	WIN and AFDC Status of Other (Not Currently Employed) Graduates, Dropouts and Comparison Group Members . . .	126
V-4	Current Employment Status of the Graduates, Dropouts and Comparison Group: Industry of Employers, Job Titles	128
V-5	Current Employment Status of Graduates, Dropouts, and Comparison Group: Proportion of Employees Holding the Same Position at the Respondent's Place of Employment Who are Women.	130
V-6	Employment Status of Graduates, Dropouts, and Comparison Group Members Ever Employed Since Benchmark Date: Hours Worked Per Week, Hourly Wage, and Estimated Annual Earnings for Highest Paying Job	132
V-7	Reasons Listed by Formerly Employed Graduates, Droputs and Comparison Group for Leaving Jobs During Period Between Benchmark Date and the Phase II Interview.	133
VI-1	Elements of Costs and Benefits	138
VI-2	Calculation of Annual Earnings	146
VI-3	Welfare Benefit Levels in Illinois and Ohio.	149
VI-4	Percent of Time the Average Respondent Did Not Receive Welfare Benefits Between the Phase II and Phase III Interviews	150

LIST OF TABLES--(Continued)

Table		Page
VI-5	Calculation of Average Reduction in Welfare Payments. .	152
VI-6	Estimated Taxes Paid by Study Participants.	153
VI-7	Bell & Howell Training Costs.	155
VI-8	Calculation of Annual Earnings.	158
VI-9	Calculation of Average Reduction in Welfare Payments. .	160
VI-10	Calculation of Annual Earnings.	164
VI-11	Calculation of Average Reduction in Welfare Payments. .	165
VI-12	Estimated Taxes Paid by Study Participants.	166
VI-13	Bell & Howell Training Costs.	168
B-1	Phase I Data Collection Results	B-7
B-2	Phase II Data Collection Results.	B-8
B-3	Phase III Data Collection Results	B-9
B-4	Response Rate for All Phases, By Site	B-11
D-1	Intake and Interest in Training, September 1978, Chicago and Columbus.	D-2
D-2	Enrollment in High-Quality Training: Attrition Points - Columbus	D-4
D-3	Enrollment in High-Quality Training: Attrition Points - Chicago.	D-5
E-1	Years of Schooling Completed by Participant/Comparison Group Status and by Site.	E-2
E-2	Type of High School Program by Participant/Comparison Group Status and by Site.	E-3
E-3	Length of Time at Longest Job by Participant/Comparison Group Status and by Site.	E-4
E-4	Reasons for Leaving Longest Job by Participant/ Comparison Group Status and by Site	E-5

LIST OF TABLES--(Continued)

Table		Page
E-5	Occupational Category of Job Title for Job Held in the Year Prior to Entering the Bell & Howell Training Program by Participant/Comparison Group Status and by Site.	E-7
E-6	Participation in Pre-WIN Training by Participant/ Comparison Group Status and by Site	E-8
E-7	Scores on Self-Esteem Measures by Participant/ Comparison Group Status and by Site	E-9

Executive Summary

This report describes a unique demonstration project initiated in 1978 by the Employment and Training Administration of the U.S. Department of Labor. The project sought to test the feasibility of a high-skill training program which would prepare participating welfare recipients for well-paying jobs in the private sector.

Using a rigorous and carefully monitored experimental design, the project sought to obtain a full assessment of project outcomes. The results of this research effort are reported in the present document.

The basic goal of the high-quality training project was to determine if a large training investment for some segment of the welfare population could result in access to well-paying and stable jobs for the women able to undertake such training. Under the regular WIN program, the proportion of clients who gained a firm foothold in the labor market and earned enough to forego participation in publicly funded programs available for low-income populations was generally low. The high-quality program was not conceived as a training prototype for all WIN clients; rather it was seen as a useful option for qualified welfare recipients who were believed to constitute a not insignificant proportion of the total welfare population. The development of estimates of the proportion of such eligibles was one of the study's sub-goals, as were information about optimal program structure, screening procedures, and support services to be put in place in future replications.

The training programs selected for this demonstration were chosen to meet the following criteria: offering training for high-demand and high-wage occupations; located in a reputable private institution with a proven placement record and experience in educating disadvantaged

students, and offering remedial classes if needed. The two institutions selected were the DeVrey Institute of Technology in Chicago and the Ohio Institute of Technology in Columbus, Ohio. Both institutions are part of the Bell & Howell Education Group (a subsidiary of the Bell & Howell Company) and offered two-year programs for electronics technicians in addition to other electronics training programs.

The training curriculum was a five-trimester program extending over 20 months. It included basic course work in mathematics and electronics-related subjects, with heavy emphasis on laboratory practice. A remedial program in arithmetic, basic science and English was required of students judged to be inadequately prepared on the basis of their entrance examination scores. This "Prep" course added one trimester to the regular five-trimester sequence.

The schools require high attendance and performance standards; failure to adhere to these standards result in probation and suspension. However, students can repeat failed courses twice and be re-admitted after suspension. Faculty and the regular student body are predominantly male and white. The regular students are young (mostly between 18 and 21). In recent years between 35 and 50 percent of students admitted to the program graduated.

Placement is a major strength of these schools. Students are given extensive preparation and counseling for the job search, and there is considerable on-campus recruitment by employers. In 1979, the schools recorded placement within 60 days of graduation for 96% of those students who sought assistance from the placement office. By 1982, as a result of the deteriorating labor market, this figure had declined to below 80%.

The WIN women who entered the program in 1978 differed from the regular students not only because they were female, older, more often Black, and single heads of household, but also because they were academically weaker. Because the goal of the program was to make the WIN clients fully competitive in the labor market, there was little modification of the basic technician program on their behalf. Additional services were provided, including tutoring and supplementary instruction, tours of work sites, and the hiring of a special counselor at each school to work exclusively with WIN students. These counselors were available throughout the life of the program to assist WIN students overcome academic and non-academic problems which might interfere with successful school completion and job placement.

The local WIN offices and the corresponding Separate Administrative Units (SAUs) also provided a variety of services (including special allowances and childcare) for these students and devoted an exceptionally high level of more than the "usual" attention and services to these WIN clients.

An experimental design was implemented during the recruitment process. Groups of clients were identified who qualified for admission to the program; half of them were randomly assigned to the program; eligible, unselected clients constituted the control or comparison group. The program was publicized in both cities and interested clients were interviewed and given the GATB test battery. Those with scores above pre-established cut-off levels (either 90, or 80 for high-school graduates) were referred to the schools where they were further tested in arithmetic and reading with tests routinely given to all applicants for the electronics training program. Those who were accepted by the schools constituted the eligible pool (N=313) from which the

participants (N=137) were randomly selected, with the balance (N=176) constituting the comparison group of eligible, unselected WIN clients. Early attrition reduced the number of program participants to 133.

Because of differences in recruitment procedures used by the two participating WIN sites, the proportion of voluntary WIN clients was very high in Columbus (79%) and very low in Chicago (9%). The average age of all participants was 30. Most of the participants had one or two children; 40% had three or more. The majority of all participants were minority group members (in Chicago, 81% were Black, 10% were other ethnic minorities; in Columbus, 47% were Black, 2% other minorities). For the total group, the mean number of school years completed was 11.5, and average scores on the three GATB tests exceed the norm of 100, with Columbus scores considerably higher than those in Chicago. Virtually all training participants had held a job at some point in their lives but at the time of program enrollment, 90% had been unemployed for more than six months. The experimental and comparison groups did not differ with respect to any of these characteristics.

As of May 1983, one WIN-sponsored student was still enrolled in the training program. This woman was expected to graduate later in 1983, thereby bringing the number of graduates to 53 and the graduation rate to 29 percent. While this is a much lower completion rate than for the usual short-duration and academically undemanding WIN training programs, it is not much lower than for the regular Bell & Howell student body and for other degree-oriented and performance graded postsecondary programs with flexible admissions criteria. Academic difficulties and personal problems which were largely responsible for the high dropout rate also affected the progress of those who managed to graduate and resulted in slow program completion. Fewer than half of those who completed the

program graduated on schedule; most had to repeat specific courses or entire terms because of poor grades. Others were suspended for poor attendance, or dropped out voluntarily for a time, then re-entered the program a term or two later. For the graduates, median enrollment time was 24 months; the range was from 20 months to 40 months. For dropouts, the median number of months in the program was seven, but 40% of them dropped out during the first five months, often after a few weeks. Poor attendance was seen as a major factor in non-completion and slow completion, and was attributed by training participants, counselors, and WIN staff to factors related to family responsibilities (lack of childcare, children's health problems), transportation difficulties, ill health, lack of financial resources, and difficulties with the public assistance system. However, systematic comparisons between dropouts and completers suggested that the existence of such problems did not sharply differentiate the two groups. Academic factors were more important: the dropout group included a much larger proportion of women who started out in the remedial program and had been enrolled in the vocational rather than general track in high-school (and had therefore had fewer science and math courses). A portion of the dropout group was also seen as more job- than training-oriented: these women dropped out of the program to accept employment. Three other factors which seemed to differentiate graduates from dropouts were motivation, a positive early impression of the training and its effect on the woman's family, and more contact with non-WIN students at the training institution.

Employment information was obtained from graduates, dropouts, and comparison group members at two points in time. Because not all members of the study population could be located for all personal interviews, some information was obtained from the training institutions and WIN

offices. Information on post-training employment is available for 48 of the 52 women who had graduated before February 1983; later employment data is available for 40 graduates. Following graduation, 34 (71%) of the WIN clients were successful in obtaining employment. Placement rates were higher in Chicago (80%) than in Columbus (61%), a difference attributable to better labor market opportunities for electronics-related occupations in Chicago. Those who were successful in obtaining jobs found them rather quickly, largely with the help of the Bell & Howell placement services; 68 percent of the jobs were started within a month of graduation. Nevertheless, many of the graduates, and not only those who had not been placed, found the job search more difficult than expected. Often, employers were unwilling to consider graduates with a low grade point average or no actual work experience. Some graduates also found it a handicap that they lacked either a private phone or a car. The need to relocate either within the city or to an out-of-town location presented a major problem for others. Placement success was most likely for the best students (those with high grade-point averages) and those who completed the program in the shortest time. Shorter periods of welfare dependence prior to training was found to be another predictor of successful placement.

While not all graduates were successful in their initial employment search, those who were placed obtained good jobs. All but one of these were full-time, and all but two were in the electronics field. Starting annual salaries averaged $12,883; the highest reported salary was $16,890. While the average pay was slightly lower than that for all Bell & Howell graduates ($13,800 for technician program graduates), it was considerably higher than the national average of $7,634 for women placed through the usual WIN services during the same year (1981).

The experiences of the employed graduates in making the transition from school to paid employment uncovered some unanticipated issues. Most of the problems center around the timing of the loss of support from public agencies, especially health care coverage for clients and their children. Many graduates felt that services were prematurely withdrawn, before graduates could acquire the resources to compensate for the loss or before employer-paid coverage became effective. In a few cases, graduates were forced to give up jobs because of transition problems.

In December 1982, employment information was again collected for all study subjects. Some of the graduates had completed the program rather recently and were still in the initial stages of their job search. Of those who had graduated earlier, a few had lost the jobs obtained after graduation because of lay-offs, while others, unemployed at the time of previous contact, had found work. Information limited to 40 graduates showed that 42% of these women were working in December of 1982. The comparable figures for dropouts and comparison group members were 32% and 40%.

While differences in employment status between the three groups are smaller than one might have expected, differences in the quality of jobs held were substantial. Thirty percent of the dropouts and 16 percent of the comparison group reported that they usually worked fewer than 35 hours per week, while none of the graduates reported working less than 35 hours per week.

The average hourly wage earned was $8.53 for graduates, $4.86 for dropouts and $5.21 for the comparison group. Assuming 50 paid weeks per year, the estimated average annual salary earned was $18,244 for graduates, $9,830 for dropouts, and $10,974 for the comparison group.

A further indicator of the financial advantage conferred on employed program graduates is the availability of a full benefit package: all have medical insurance and all but one have both dental insurance and sick leave. Slightly fewer than half of the employed dropouts and comparison group members reported having comparable full benefit packages. In sum, employed graduates appear to have adequate incomes and fringe benefits to remain independent of welfare even in the event of illness, while employed members of the other two groups do not have the earnings "cushion" and insurance protection to assure continued independence. This is also suggested by the data on welfare payments. All employed program graduates reported themselves as being independent of the welfare system, while 17 percent of the employed dropouts and eight percent of the employed comparison group members continued to receive AFDC.

Twenty-three percent of the employed dropouts reported that completing a portion of the electronics technician training program directly affected their ability to obtain their current job. Similarly, 30 percent of the employed comparison group members reported hat attending the orientation session (part of the study selection process) influenced their decision to look for the job they held at the time of the interview. Since none of these women were employed in the electronics industry, this suggests that qualifying for this very selective training program provided some motivation for these clients to seek employment, or that their identification as capable potential workers motivated the WIN staff to make special efforts on their behalf.

While direct comparisons between graduates, dropouts, and comparison group members show substantial earnings advantages for graduates, it is not possible to conclude from these data that the training program is

necessarily a cost-effective one. Cost-benefit analyses based on earnings and welfare dependency of study participants and comparison group members and carried out as part of this research showed that during the post-graduation observation period for which data were available (approximately 22 months), the accumulated earnings of study participants had not reached the point of exceeding training costs, including foregone earnings. Similarly, from the taxpayer's perspective, post-training welfare savings and tax receipts had not reached the point of covering training costs. More detailed analyses by study site showed higher cost-benefit ratios for Chicago than for Columbus, and separate analyses for graduates also yielded somewhat higher ratios, but in no case did benefits exceed costs. No life-time earnings stream projections were developed, because the picture of likely future labor market experiences was too unclear at the close of the study period, and because the cost-benefit analyses were subject to a number of limitations, including missing data for which estimates were substituted and non-inclusion of fringe benefits in earnings computations because of insufficient data. There is also some evidence that the comparison group's relatively favorable labor market experience over the study period is partially attributable to the study's screening and random assignment processes, which gave the non-selected women extra motivation and more intensive WIN services than would have been available in the absence of the demonstration research program.

On balance, the outcome evaluation points to mixed findings. Those women who completed the program and found work did measurably better than comparably qualified women who did not have access to this training. During the observation period, their earnings were high enough to insure independence from all public support sources.

But the number of such women, compared to the total number admitted into the program was small. Fewer than one-third of the enrolled women graduated. The proportion of dropouts is not much higher than for regular students enrolled in post-secondary programs, and need not be a source of major concern provided unsuited students are not encouraged to stay in the program for extensive periods of time and are instead directed to other training or to employment opportunities.

More worrisome were the problems encountered in the transition from school to work for some of the women who completed the program. Some transition support services have been identified which might facilitate job placement. Most likely, earlier contact with potential employers through part-time work experience built into the curriculum, or earlier employer commitments to recruiting WIN-sponsored graduates, would be most effective.

The availability of other high-quality training options which might be a better fit for some portion of the qualified WIN client population would probably improve retention and placement outcomes.

Among the Appendices included in the study is an extensive bibliographic review of earlier programs designed to promote employability and employment of welfare recipients, detailed descriptions of the electronics technician training program, and a detailed summary of the study methodology.

ASSESSMENT OF A WIN QUALITY
DEMONSTRATION TRAINING PROGRAM

FINAL REPORT

I. RESEARCH AND EVALUATION GOALS

Beginning in the summer of 1978 and ending with the preparation of the present final report in the fall of 1983, the Bureau of Social Science Research has been intimately involved in all phases of a unique and pathbreaking demonstration funded by the Employment and Training Administration of the U.S. Department of Labor. The project sought to test the feasibility of a high-skill training program which would prepare participating welfare recipients for well-paying jobs in the private sector. BSSR was the research arm of the demonstration with responsibility for developing the experimental design on which the research findings were to be based, monitoring adherence to the design and observing the implementation of the project. A large volume of data was collected from participants, administrators and other officials for the purpose of providing a full assessment of the experiment. The present report summarizes our findings and recommendations.

The Work Incentive Program--which was launched in 1968 and reauthorized every year since--has as its stated aim the achievement of employability and independence from welfare for those welfare recipients who are able to work. Year after year, it failed to accomplish this goal for most participants. Assessments of training or placement outcomes under the WIN program showed time and again that it did little beyond preparing most trainees for low-paying and unstable jobs which often required income supplementation to provide families with minimal

subsistence, and which frequently saw many trainees return to the welfare rolls after a short interlude in the labor force. Over the years, critics of the program suggested that a possible--and perhaps even cost-effective--alternative is to make a bigger training investment for some segment of the welfare population in order to provide them with access to financially and socially rewarding jobs which would really enable them to function independently and attain a standard of living and a lifestyle characteristic of middle-class Americans.

The High Quality Training Program described and assessed in this report was put in place to explore this possibility. Clearly, such a program aims at an optimal solution to the problems of welfare mothers chosen to participate. If successful in completing the training, they would have access to well-paying jobs, adequate fringe benefits, career opportunities and relatively secure employment in growing companies. In effect, their status would be that of well-paid technical workers with competitive skills, and they and their children would move from poverty to at least a modest middle-class existence.

One might argue that such aspirations are unrealistic for the bulk of welfare recipients, and that more modest solutions, i.e., jobs which provide lower wages and fringe benefits, but which yield incomes at least equal to welfare payments are a more realistic goal for most able-bodied welfare recipients. It should be emphasized that the program was not conceived as a training prototype for all WIN clients. However, there are a number of good reasons why the alternative tested in the High-Quality Training experiment deserved systematic examination:

1. Broadly based studies of low-income families (in particular, the long-term panel study of Income Dynamics carried out by the University of Michigan) demonstrate that families whose heads are employed in low-income jobs frequently must seek assistance because

of layoffs, uncovered illness periods, etc., or require continuous help in the form of food stamps, medicaid, or income supplementation. Working mothers who are heads of households are especially likely to need this type of assistance. When benefits are withheld from poor families with working parents, as is the case in some states and under current Federal guidelines, serious problems may arise with respect to the health and nutrition status of children.

2. If some segment of the welfare population can indeed be moved into more permanent jobs providing true financial independence, the benefits are enormous, not only for the women themselves, but for their children and for society. The high training costs would be offset in a relatively short time by tax contributions and savings in long-term welfare and social services.

3. There are mechanisms available to finance this type of training for welfare recipients that are independent of the welfare system, in particular, educational loan and grant programs (e.g., National Direct Student Loans and Pell Grants). In the past, such programs were seldom used by welfare recipients, largely because federal, state and local agencies emphasized short-term training and immediate placement over longer-term training efforts. If it can be demonstrated, however, that for some welfare recipients longer training investment is feasible and cost effective, more flexible policies might be introduced.

Clearly, a test of the feasibility and outcomes of High Quality Training for welfare recipients was highly desirable. At the same time it was generally agreed that the odds were not high for the unqualified success of a first project of this type, which required enormous motivation and effort on the part of participants, and great flexibility and patience on the part of training institutions and administrative agencies. Much had to be learned about program structure, support services, and student and staff attitudes. Equally important was a research design which would make allowance for the proposed recruitment procedures. As plans for the demonstration began to crystalize, and discussions were initiated with training institutions and WIN officials, it became clear that acceptance of participants would be a selective process. Only welfare recipients who were highly motivated and who could satisfy pre-set levels of academic aptitude and achievement would

be eligible for enrollment. Such selective recruitment immediately raised the question of true program effects: was it not likely that highly qualified welfare recipients might achieve success in the job market and economic independence independent of program participation, for example, by finding good jobs (with or without the help of WIN placement efforts) or by enrolling in other types of skill training available in the community? It was therefore decided early on that only a true experimental design, incorporating a control group and long-term follow-up of participants and controls, could provide valid answers about program effects and outcomes.

The present report details our observations and findings over a period of approximately four and one-half years, from the time the first trainees were selected for program participation (June, 1978) until early 1983, when the last round of interviews was conducted with participants and controls. Four and one-half years is a long time period for a study of a demonstration program, but in fact it is not long enough to generate all the answers one would need to obtain for a full assessment. Those women who completed the training program had had the opportunity for less than two years of labor market experience, and answers about job stability and career progression require a much longer period of observation. The material in this report is most definitive with respect to process and early outcomes. We have learned a great deal about training retention and factors associated with successful program completion, and about the transition from training to first job. We have also had a sufficient observation period to convince ourselves that those women who met the entrance qualifications for this program but were not selected--the control group--did not generally experience a marked improvement in their situation over the observation period,

obtaining neither training or placement opportunities which enhanced their earning power.

One of the greatest difficulties in conducting the type of research on which this report is based is attrition of the study population: low-income persons move frequently, and are often hard to locate for reinterviews. As shown in Appendix B, we were able to keep losses of study subjects at a minimum as a result of elaborate address maintenance and incentive procedures. We feel that we can claim for the data presented in this report a level of reliability seldom achieved in studies of this type.

Prior to undertaking the demonstration program, and throughout the life of the study, we paid close attention to past and current efforts carried out by government agencies and private organizations directed at improving employability and economic independence of AFDC mothers and other low-income women. A review of evaluations and research conducted in conjunction with regular WIN and CETA programs enabled us to identify some of the factors associated with more or less successful training outcomes, and helped shape some aspects of the demonstration and of the research design. We also identified a number of other small-scale demonstration programs, which featured highly intensive approaches to preparing disadvantaged women for steadier and more rewarding employment. The information which we assembled about these earlier training efforts, and which is detailed in Appendix G, alerted us to the difficulties which even highly motivated and capable welfare mothers experience when they attempt to move from welfare dependence to economic self-sufficiency.

The organization of this report is basically chronological, with the earlier chapters describing the training program, the process of participant selection, personal characteristics of participants, and the school experience, with special emphasis on comparisons between graduates and dropouts. The latter chapters deal primarily with labor market experiences, the transition from school to work, and the costs and benefits of this program based on, in most cases, one-year follow-up observations. Several appendices are also included. These may be helpful to WIN and other employment-oriented programs for low-income persons in replicating or improving this type of training program. More detailed versions of the early chapters appeared in two interim reports available from the Department of Labor.

II. DESCRIPTION OF THE DEMONSTRATION PROGRAM

In this chapter we present a description of the study design, of the training institutions and training programs chosen for this demonstration, of the procedures used to select the individuals to participate in the study, and finally of the study participants themselves.

The Electronics Technician Training Program

Selecting The Training Institution

A number of criteria were considered by the Department of Labor during the process of selecting a training institution for the assessment of the effectiveness of high-quality high-tech training for WIN women. Foremost among these was finding an institution which trained students for an occupation which paid a high enough wage so that the graduate would become economically self-sufficient and one for which there was and would continue to be a demand in the market place.

In order to find such a training program, it was necessary to consider programs which differed greatly from those previously offered to women through WIN. (See the discussion of earlier WIN programs in Appendix G.) Needed were training programs which were rigorous and demanding, took a substantial amount of time to complete, and were for occupations which were nontraditional for women. The Labor Department also decided to look for training that was provided by a private institution, accredited and respected by employers of its graduates, one which had a proven record of placement success, experience in educating

disadvantaged students, and which was willing to provide remedial classes for those WIN clients who needed them. After considering a number of different institutions offering training in a variety of occupations, the demonstration project was awarded to the Bell & Howell Education Group (a subsidiary of the Bell & Howell Company) to train WIN women to become electronics technicians. The two Bell & Howell institutions selected for the training were the DeVry Institute of Technology in Chicago and the Ohio Institute of Technology in Columbus.

To allow those familiar with other WIN training programs to make comparisons between this training and that provided in earlier training programs, and to acquaint the general reader with the nature of the training provided by the Bell & Howell Education Group, this part of the chapter presents a description of the program and the schools in which it was offered. [1]

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1. The electronics technician program offered by the Bell & Howell Education Group undergoes continual revision to reflect changes in electronics technology and in job market conditions. For example, radio and television are currently receiving less attention in the curriculum to reflect the declining employment opportunities in these fields. For clarity of presentation, the curriculum is described as it was when the students first enrolled in 1978. Some changes subsequently were made and experienced by later cohorts of WIN students. Not every student, therefore, experienced the same curriculum, as the students entered the program at different times, took various lengths of time to complete the program, and were enrolled in two separate schools which adopted changes at different times.

Basic Curriculum

> The graduate of the Electronics Technician Program is prepared for careers that emphasize the skilled maintenance and servicing of sophisticated electronics products of many kinds, including radio, television, communications systems, computers, controls and instrumentation. The graduate has prepared for such careers as: communications technician, computer technician, electronics systems technician, production test technician... Graduates from the Electronics Technician Program work primarily with the maintenance and operations of equipment. The work requires troubleshooting to locate problems, and then repairing, calibrating and adjusting the equipment. [2]

The electronics technician curriculum is a five-trimester program which extends over 20 months. Each trimester is 15 weeks long. Twenty-two hours of class and laboratory work are required each week. The typical curriculum starts with basic courses in electricity, electronics, trigonometry and algebra, goes on to increasingly complex courses covering computer structure and applications, and television, audio-radio systems and industrial controls. Laboratory practice geared to each trimester's offerings is emphasized. (For a detailed description see Appendix A.) The coursework requires considerable familiarity with mathematical concepts and skills. In the early 1970's the school developed a remedial training program called "preparatory studies" for those students who were judged to be inadequately prepared on the basis of their entrance examination scores. These students were required to complete successfully the remedial course before being allowed to enroll in the first trimester of the regular technician

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2. Ohio Institute of Technology, Academic Catalog 1977-1978, p. 9-10.

course. The "Prep" course added one trimester to the normal five-trimester sequence and included instruction in arithmetic, basic physical science, and English, including grammar and punctuation. (See Appendix A.)

Program Characteristics

Compared to most WIN sponsored training programs, the technician program is long and rigorous. School officials estimate that only 35 to 50 percent of all students (most of whom are young, male, high-school graduates) admitted into the technician program graduate. During the training, students experience time demands and requirements for self-discipline that school administrators feel resemble those existing in the working world. The administrators argue that the resulting socialization gives students the values and self-discipline that they need to succeed and for which employers are looking in new employees.

The schools have a number of rules and regulations regarding performance and attendance because it is believed that there is a relationship between regular attendance, good grades and program completion. Each student is expected to attend every class, and is responsible for the work missed and for contacting the instructor about make-up work. If a student misses a given number of hours in a course, this results in probation or suspension. [3] A student whose cumulative grade point average falls below a 2.0 average (out of a possible 4.0) is placed on academic probation. A student whose grade point average for the next term does not exceed 2.0, or whose cumulative average is still

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3. Probation results from missing the equivalent of one week's classes, suspension for missing the equivalent of two weeks' classes.

below 2.0 after two terms on probation, is suspended from the school and may not reapply for one trimester. A student who fails a course must repeat it, and both the old and new grades will appear on the student's transcript. A student may not repeat a course more than twice.

During the technician program, classes tend to be large, especially in the first trimester. Conventional lecture classes may range in size from 15 to 80 students. Classes using other teaching methods such as team teaching or modularized instruction may reach 130 students per class. [4]

Laboratory sessions account for 20 to 30 percent of instructional time and also tend to be large, but there are faculty and faculty assistants available (one to every 20 students) to help the students with their assignments. Within the laboratories are individual student work spaces. Each space has basic electronic equipment such as an oscilloscope, power supply and a volt meter. Also in the lab are a sheet metal shop, a printed circuit etching facility, sweep alignment equipment, digital trainers, analog and digital computers, a TV system, microwave and servo mechanical trainers, and industrial electronic devices.

The Schools

An effort has been made to create a collegiate atmosphere at the two Bell & Howell Education Group schools which took part in this study. Both have attractive, new facilities with considerable space devoted to student lounges, dining areas and game rooms. A wide range of student activities are available including a student senate, theater, chess and

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4. DeVry Institute of Technology, Academic Catalog 1980-1981, p. 15.

amateur radio clubs, intramural and varsity athletics, and school dances.

In addition to the electronics technician program, the Bell & Howell Education Group also offers a seven-trimester Associate Degree program and a nine-trimester Bachelor's Degree program in electronics engineering technology. At the time of the study, the student body at DeVry numbered 2,500 with 1,200 in the Electronics Technician Program. At the Ohio Institute of Technology in Columbus, the numbers were 2,300 and 1,065 respectively.

The faculty and the non-WIN students are predominantly male (94%) and White (67%). Eighty percent of the regular student body is in the traditional college age group, 18 to 21. About two-thirds have had some prior exposure to electronics and have a long-standing interest in it. About 70 percent of the students are from "noncollege" families, and many might not be enrolled in post-secondary education if not admitted to a Bell & Howell school. [5] About 50 percent of those admitted in 1978 came from families with incomes of $15,000 or less. Forty-four percent had been in a general high school program, while 33 percent had been in a college preparatory high school program. Nearly all (98%) of the non-WIN students held a high school degree or G.E.D. at the time of admission. During their time as students, about 85 percent held a part-time job, averaging 20 to 25 hours per week.

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5. Mills, Virginia, 1977. "From School to Work: The Experiences of Bell and Howell Schools in Matching Graduates to Careers." Paper presented at the Labor Market Intermediaries Conference, National Commission for Manpower Policy, Washington, D.C.

Placement Services

All Bell & Howell students are given extensive preparation and counseling for finding a job. From early in the program they are given descriptions of the kinds of jobs they will be qualified to hold upon graduation. At the start of the student's last term, sessions are held which cover the formulation of career goals, resume preparation and interviewing techniques and etiquette. Individual interviews with the placement office staff are scheduled for all students, and all resumes are reviewed by the staff. The placement office also works to attract employers to the school and its graduates, and encourages employers to send recruiters to the campus. In 1979, representatives from 58 companies visited the Ohio Institute of Technology in Columbus and 54 visited the DeVry Institute of Technology in Chicago. The placement office also prepares a weekly job lead package of companies which are interested in interviewing graduates off campus and contacts those students who have expressed an interest in these positions. The placement office closely monitors the activities and success of each graduate, helping those who encounter problems. Of those student who asked for assistance in 1979, the Bell & Howell Education group placed 96 percent within 60 days of graduation. In 1979, the average base starting salary was $13,032 per year for technician graduates in Chicago, and $12,588 for technician graduates in Columbus. More recently, the schools have had greater difficulty in placing their graduates as a result of the recession; in particular, the number of companies which participated in in-school interviewing showed marked decline and the successful placement rate among graduates seeking a job through the school placement offices has decreased from more than 95 percent to less than 80 percent. The deteriorating labor market may

have affected the placement success of later cohorts of WIN graduates.

Modifications Of The Program

The WIN women who entered the Electronics Technician Program in 1978 entered with characteristics which differed from those of the average non-WIN student. They were, on the average, academically weaker: a higher proportion did not hold a high school diploma or a G.E.D. certificate on admission; many more of those who qualified for admission did so with admission test scores which were lower than the class average; and, the proportion of WIN students who tested into the "Prep" program was much higher than that of non-WIN students. The WIN women entering the program also differed in the degree of family responsibility. Nearly all were single heads of households and had one or more children for whose care they were responsible. Because they were also dependent on public assistance programs to provide the means for this care, it was necessary for them to interact continually with a variety of agencies in order to maintain their level of support.

However, because the goal of the program was to make WIN clients fully competitive in the labor market, there was little modification of the basic technician program on behalf of the WIN students. There were no changes in the structure or scheduling of the program or of the level of difficulty of the coursework. The WIN women were fully integrated into the student body and took no classes or lab sessions as a special group. Some provisions were made for the special academic needs of the WIN students. More tutoring and supplementary instruction were available to the WIN students than to the rest of the student body. Additional faculty assistants were hired especially to help the WIN students in the laboratories. The laboratories were also made available

to the WIN students in the evenings and on weekends for extra work. In addition, supervised study periods were set up and a number of faculty members donated their own time to conduct classes and review sessions for WIN students.

To help the WIN students become familiar with the kinds of careers for which they were being prepared, a number of special activities were held for them. These included guest speakers from companies which employ electronics technicians and tours of companies where WIN students could view the kinds of jobs and work settings which they might experience in their own careers.

The major modification to the program on behalf of the WIN students was the hiring by each school of a special counselor to work exclusively with these women. The counselors' major duty was to help the students overcome academic and non-academic problems which might interfere with staying in school, doing well in their classes, or getting a good job after graduation. A major responsibility was to be available to listen to the students' personal problems, sometimes leading to intensive individual counseling, where possible, to help students take action to solve their own problems, or to make arrangements to solve problems beyond the scope of the students' capabilities. This led to frequent talks with WIN, Separate Administrative Unit (SAU) and welfare counselors, and an advocacy role for the rights of students. The counselors also referred students to other agencies and sources of aid for their legal, physical, and domestic problems.

Another important aspect of the counselors' activities was to provide informal emotional support for the women; to share in their successes and their worries. This involved, for example, going to court with a student involved in a child custody case, taking a student to the

hospital, or helping a student find a place to live safe from an abusive ex-husband. Counselors also worked informally to help the women build their own peer support networks.

The counselors worked to help the women function successfully in school by monitoring student grades and attendance as well as arranging for special tutoring or other services when they spotted a potential problem. They provided academic counseling to help the women see how their own behavior might be contributing to problems, to alert the women to behavior which could lead to probation or to dismissal, and to encourage them to take the initiative in using school resources to their fullest advantage. The counselor's official duties also included reporting on student attendance and performance to the local WIN office.

The counselors planned and conducted seminars for the WIN women. Initially, the seminars were intended as a vehicle for building peer support networks and for giving help in understanding the workings of the school. The purpose of the seminars expanded to providing overall support services related to academic performance, program completion and successful job placement. The types of seminars which were conducted included:

1. School related seminars covering such topics as: organization, schedules, regulations, study skills, "math anxiety," and advice from more advanced students on what to expect in future classes and how to cope with new demands.

2. Seminars related to personal growth and the development of interpersonal skills such as: assertiveness training through role playing, advice on how to cope with stress, effective listening, communication skills, and the development of effective strategies for dealing with instructors.

3. Job related seminars such as: industrial tours, talks with company representatives, talks by previous women graduates, mock interview sessions.

4. Group solidarity functions such as: Christmas parties, incentive awards presentations, women's dinners.

5. Public agency related topics including help with: WIN procedures, food stamp eligibility, childcare services, emergency food services, and legal aid.

WIN Services For Training Program Participants

The local WIN offices and the corresponding Separate Administrative Units (SAUs) provided a variety of services to the women taking part in the training. In Chicago the women received the normal services given WIN clients participating in any WIN-sponsored training program. These included tuition (supplemented by BEOG, also called Pell grants), books, fees and supplies, as well as supplementary payments of up to thirty dollars per month. The clients also received a transportation allowance, meal money, and payments for babysitters. In Columbus childcare providers were paid for and organized by the SAU. The SAU also made special efforts to visit the women selected for the training in their homes, and to encourage them through talks and letters.

The WIN offices in both sites stressed that because the training was being conducted as part of a demonstration program by the national office, WIN staff were encouraged to take a special interest in the progress of each client, and to give special attention to their complaints and problems. The women occupied much more of the staff's and supervisor's time than did the average client; therefore they cannot be said to have received the "usual" WIN services or treatment that one might observe were this training part of an ongoing program.

Evaluation Design

U.S. Department of Labor officials decided that a random assignment, "experimental" design should be used to assess the impact of the training program on the subsequent labor market and public assistance activities of study participants. They also selected two large cities for the demonstration project where Bell & Howell Schools were located and in which local WIN personnel felt they could identify sizable pools of WIN clients who could meet the academic qualifications necessary for admission to the training program. From these pools of women identified as qualified for and interested in the training offered, study members were randomly assigned to either the "participant" group (those enrolled in the training program), or to the "comparison" group (those not admitted to the demonstration training program, but otherwise eligible to receive "normal" WIN services.) The selection procedure is described in the next section of this chapter.

A variety of data sources are used in the study. A series of three personal interviews with all members of the study population, whether they were assigned to the participant or comparison group are the principal source of information. These interviews were conducted shortly after the training program began (Phase I), at the time of graduation from the program about 2 1/2 years later (Phase II), and one year after graduation (Phase III). Clients who dropped out of the training program were given an additional interview at the time they left the training. A description of each round of interviews and the response rate for each round are presented in Appendix B.

Additional sources of information include test scores and questionnaires from the screening process, school transcripts, reports from school counselors and the school placement offices, the results of site visits by BSSR staff, and numerous discussions with school and local WIN office staff.

The Process Of Client Selection

In order to implement an evaluation design based on random assignment of clients to "experimental" (i.e., program enrollment) and a "no-treatment control" groups, it was necessary to identify pools of clients who were qualified for admission to the training institutions and then to select clients randomly for enrollment from those who met admissions criteria. Selection of individuals who were qualified for training began with the local WIN offices. So that the program would get under way as quickly as possible after site selection (and against the advice of the evaluating organization), a small group of WIN clients was selected for July 1978 enrollment in Chicago. The procedures for screening and selection were developed for this group and, with only minor modification, were used for selecting October 1978 enrollees at both sites. The detailed guidelines that were developed were sent to WIN staff at each site. These are included as Appendix C to this report.

In brief, selection involved several stages. First, there was an announcement of the program which invited interested persons to contact the local WIN office. In Columbus the program was publicized through television, radio and newspaper spots and through mailings and phone calls to all WIN participants and eligible AFDC recipients. In Chicago there was a half-hour television program publicizing this opportunity,

but, unlike Columbus WIN, the Chicago WIN offices otherwise limited direct dissemination of information about the program to current mandatory WIN participants. [6]

Both local WIN offices then began a screening process. Clients were interviewed by their WIN counselors to determine their interest in training as opposed to direct job placement. Those interested in training were asked about their interest in training for nontraditional careers for women, particularly electronics, welding, and automobile mechanics. Those who expressed such an interest were tested at the WIN office using the Employment Service's GATB test battery. This particular instrument was chosen because Chicago WIN personnel felt that it was the least culturally biased of the vocational aptitude tests readily available to them. At the Columbus office the GATB tests were preceded by BOLT tests to insure that the clients had sixth-grade academic functioning ability which would ensure the validity of their GATB results.

All clients who obtained GATB:G (general learning ability) scores above one of two pre-established cutoff points , either 90, or 80 for clients who had both completed high school and expressed an interest in the specific training being offered at the Bell & Howell schools were

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6. Not all adults in families receiving AFDC were required to enroll in the WIN program, and the publicity was designed to attract non-mandatory individuals to the training program. There are a number of considerations involved in determining whether an individual is required to enroll (a "mandatory" WIN participant) or whether enrollment is optional (a "voluntary" WIN participant). For the women in this study the most common determining factor was the age of the youngest child. Female heads of households with children under six years old are not required to enroll in WIN.

given further information about the Bell & Howell program. [7] It was emphasized that the training would take a minimum of 20 months to complete, but that the pay-off to graduates would be a high-paying job which would provide a self-supporting income and independence from welfare. They were also told that in addition to the regular course of study and school services, WIN clients would receive supplementary support services, including extra counseling, study and career orientation courses, tutoring, a preparatory trimester for those who needed remedial training, and placement upon graduation. Clients were also informed that an orientation session and additional testing at the local Bell & Howell school were required. Each interested client was given an arithmetic review booklet to help her to prepare for the Bell & Howell test. Finally, it was emphasized to the clients that this was a demonstration program, and that only half of those who attended the orientation session and qualified on the Bell & Howell tests could be selected for the training. The final selection was to be made at random, so each fully qualified client had a 50-50 chance of being selected. In addition, clients were told that regardless of program status, all eligible clients would be asked to participate in the research to asses the program.

The orientation session at the local Bell & Howell school lasted approximately three hours and included a film and slides on the electronic field, specifics about the school and its program, a tour of the facility, individual screening and testing, and lunch. School

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7. The original cutoff point of 90 was modified because local WIN officers were not identifying enough interested clients who scored above 90 to fill both the participant and comparison groups in the time allowed. Toward the end of the selection period for the October 1978 group, some clients were sent to Bell & Howell for testing without first taking the GATB test battery.

academic and attendance policies were stressed, as were placement opportunities. During the session, clients were given a 25-question arithmetic test developed by Bell & Howell and the Stanford Advanced Reading Achievement Test, the same tests routinely given to all applicants for the electronics technician training program. All clients answering at least nine of the arithmetic questions correctly were considered qualified for enrollment. For clients scoring below this level on the arithmetic test, those whose reading level on the Stanford Achievement Test was at least ninth grade were also considered qualified (a lower standard than that for non-WIN students). In Chicago, all clients received both tests; in Columbus, only those who did not qualify on the arithmetic test were also tested on reading ability.

We estimate that roughly ten percent of the active WIN population would qualify for the type of training described in this study. This may be a low estimate because only those WIN participants who expressed an interest in training (about 20% of WIN clients) and then an interest in non-traditional training (about 40% of those interested in training) began the testing process. The ability of other WIN clients to qualify for such training can only be estimated. A more complete discussion is included in Appendix D.

The final selection of eligible clients for enrollment at the Bell & Howell school or assignment to the "comparison" group was the responsibility of BSSR. As clients were determined to be qualified, their names were submitted to BSSR by phone. There was no apparent ordering of the names either alphabetically or by test scores. BSSR had recommended postponing the final selection process until the names of all qualified clients were available, but the local WIN offices urged BSSR to make the assignments as groups of qualified clients were

identified because of the need to arrange childcare and complete other paperwork for the clients who would be entering the Bell & Howell program. As the names were phoned in, they were numbered consecutively and then half of them were selected for training by means of a table of random numbers. The names of the individuals thus selected were phoned in to the appropriate WIN office and later a check was made to see that the clients who entered training were indeed the ones selected by BSSR. During the selection of the second group in Chicago in October 1978, the process was modified slightly — qualified clients were grouped by regional WIN offices within Chicago to ensure proportional representation for the clients from each of Chicago's four offices.

Some of the clients selected for training chose not to enroll; these were subsequently considered members of the comparison group. The selection of their replacements in the participant group was not always random. In some cases, another name was selected at random from a list of those who were qualified for the training. In a few instances, the recommendation of a local WIN representative with respect to which client should be substituted was accepted. The substitutions made in this manner tended to be either highly qualified or highly committed clients who had taken the trouble to contact their WIN counselor after learning of their initial non-selection. In other instances, replacements were selected on the basis of ethnicity, e.g., an Hispanic client was added in Chicago. A few women originally assigned to the control group later applied and were admitted to the schools through the usual means. Nearly <u>all</u> encountered severe financial hardships after a term or two and applied for admission to the experimental group in order to to be eligible for tuition support. For a detailed discussion of the problems encountered in implementing this selection process, see White

and Weidman. [8]

It should be stressed that no attempt was made by BSSR to stratify the population by such characteristics as test scores or years of education completed before the assignment to the participant or comparison groups was made. It was postulated that these factors were not necessarily good predictors of potential success in the training program, given the non-traditional nature of the clientele (i.e., females in a male-dominated field, minorities in a majority-dominated field). Furthermore, the aptitude tests used in the selection process had not been standardized for minority populations, and there was little correlation found among the screening criteria. Of the tests used by the local WIN offices to determine which clients to send to Bell & Howell for further testing, the GATB:N test for numerical aptitude turned out to be the best predictor of performance on the Bell & Howell arithmetic test and thus qualification for the program. However, the correlation between these tests was only .45 for the first group of enrollees in Chicago, .42 for the second group of Chicago enrollees and .45 for the Columbus group. The correlation between the number of years of schooling completed and test performance was even lower. It was highest with the arithmetic test at .27 and with the GATB:V test of verbal ability at .19.

With the exception of the nonrandom replacement of those who chose not to enroll, differences in the distribution of characteristics among the participant and comparison populations may be attributed to the

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8. White, Richard N. and Weidman, John C. 1983. "Doing Evaluation Research for Public Agencies: Problems with the Assignment of Clients to Experimental and No-Treatment Control Groups in Field Experiments." Sociological Practice, Vol. 4, No. 2, 1983.

probabilities of the occurrence of such distributions when making random selections without stratification. On the whole, the comparison and participant groups appear well matched on most of the characteristics mentioned in this study. A detailed description of the few characteristics on which there were some differences is included in Appendix E.

Characteristics Of WIN Clients Entering Training

This section describes the personal and family characteristics (i.e., age, marital and family status, ethnic background, schooling and geographic mobility) of the women who actually enrolled in the Bell & Howell training. All information reported in this chapter was obtained from Phase I interviews and are presented in more detail in the Phase I Report.[9]

For these characteristics, on which significant differences were found between participants in Chicago and Columbus, tables are broken down by site.

WIN Status

Because of the differences in the recruitment procedures used by each local WIN office, the proportions of mandatory and voluntary WIN participants differ between the two sites. As shown in Table II-1, there are proportionately more WIN volunteers in the Columbus study population than there are in the Chicago study population. For this and other characteristics reported subsequently, it is not surprising that

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9. White, Richard N. "Assessment of a WIN High Quality Training Project, Phase I Report: Characteristics of Participants." BSSR, Washington, D. C., 1980.

TABLE II-1

WIN REGISTRANT STATUS OF TRAINING PARTICIPANTS, BY SITE
(In Percentages)

Registrant Status	Chicago	Columbus	Participant Group Total	All WIN Registrants 1978[a]	WIN Job Entrants 1978[a]
Voluntary.	9	79	57	17	18
Mandatory.	91	21[b]	43	83	83
	(N=57)	(N=76)	(N=133)	(N=1,013,247)	(N=286,404)

[a]Source: WIN 1968-1978: A Report at 10 Years, The Work Incentive Program, Ninth Annual Report to Congress, U.S. Dept. of Labor, U.S. Dept. of HEW, Washington, D.C., 1979. Overall WIN statistics include both men and women.

[b]Chi-Square=61.4; p=.00.

the groups of study participants in the two sites do not have identical characteristics, as the populations served by the two WIN offices are not identical.

For most women, the determination of WIN status is based on the age of their children. Those with children under age six are usually voluntary participants, while those whose children are six or older are usually mandatory participants unless they are not the head of a household. As the age of their oldest child is highly correlated (.74) with the age of the women in this study, and as the Columbus training program has a higher proportion of voluntary WIN participants (Table II-1), it is not unexpected that the groups of women at the two sites differ with regard to characteristics related to their ages and to the ages of their children.

Age

The average age of the women in the participant group at the time of the first interview was 30. Twenty-six percent were younger than 26, 55 percent were between the ages of 26 and 34, and 19 percent were 35 and older. This distribution is not unlike that for all WIN registrants who entered jobs during fiscal year 1978. As anticipated from the differences in WIN status (voluntary/mandatory) in Chicago and Columbus, Columbus participants are younger than Chicago participants (Table II-2).

TABLE II-2

AGE AT THE BEGINNING OF THE STUDY, BY SITE
(In Percentages)

Age at the Beginning of the Study	Chicago	Columbus	Participant Group Total	WIN Registrants 1978[a]	Win Job Entrants 1978[a]
Under 20 years	0	4	2	9	8
20 to 21 years	3	8	6	6	7
22 to 24 years	16	22	20	10	12
25 to 29 years	30	36	33	20	24
30 to 39 years	44	22	32	34	34
40 to 44 years	3	1	2	10	8
45 to 54 years	3	7	5	10	7
55 to 64 years	0	0	0	2	1
65 years and over.	0	0[b]	0	0	0
	(N=57)	(N=76)	(N=130)	(N=1,013,247)	(N=286,404

[a]Source: WIN 1968-1978: A Report at 10 Years, The Work Incentive Program, Ninth Annual Report to Congress, U.S. Dept. of Labor, U.S. Dept. of HEW, Washington, D.C., 1979. Overall WIN Statistics include both men and women.

[b]Chi-Square=17.3; p=.01.

Marital And Family Status

Most of the women in the participant group have been married at one time but were either divorced (34%) or not living with their husbands (26%) when they entered the program. Usually, they were first married between the ages of 18 and 20; the average age was 18.8. This average is somewhat younger than the national median age of women at the time of their first marriage, which over the last 30 years has fluctuated between 20.2 and 21 years of age.[10] The largest portion of the women in the participant group also had their first child between the ages of 18 and 20; the average age was 19.1, and a large minority became mothers at age 17 or younger (Table II-3).

All of the women in the participant group had at least one child, and half had more than one. Judging from Census data, the women in this study have slightly larger families than do all U.S. female heads of households who have children (Table II-3).

Most of the women in the participant group said they did not expect to have any additional children during their lifetime, and the majority of the others expected only one more child. Reports of a number of pregnancies since the program began suggest that the women in this program may not in fact have chosen to defer planned pregnancies until after the training was completed, although unplanned pregnancies are of course an alternative explanation (Table II-4).

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10. U.S. Bureau of the Census, Statistical Abstract of the United States: 1978, (99th edition), Washington, D.C., 1978.

TABLE II-3

MARITAL AND FAMILY STATUS OF TRAINING PARTICIPANTS
(In Percentages)

Which of the following best describes your current marital status?

Married, living with husband	4
Married, not living with husband	26
Divorced	34
Widowed	0
Never married	36
	(N=129)

How old were you when you were first married?

17 years old or younger	29
18 to 20 years old	51
21 years old or older	20
	(N=82)

How old were you when your first child was born?

17 years old or younger	29
18 to 20 years old	48
21 years old or older	23
	(N=133)

How many children do you have?

	Training Participants	Female Heads of Households with Children Nationwide[a]
One	29	38
Two	32	29
Three	22	17
Four or more	17	15
	(N=133)	

[a]Source: U.S. Bureau of the Census, Statistical Abstract of the United States, 1978 (99th Edition), Washington, D.C.

TABLE II-4

HOW MANY MORE CHILDREN DO YOU EXPECT TO HAVE IN YOUR LIFETIME?
(In Percentages)

None	71
One	21
Two or more	8
	(N=128)

Childcare

A variety of arrangements were made to care for the children of the women in this study, but overall the largest group of respondents reported that childcare was not necessary, either because their children were old enough to look after themselves or because their children were in school during the same hours they were. The arrangements for childcare differed between the Chicago and Columbus groups, reflecting the greater provision of daycare by WIN in Columbus and the differences in age of the children. The Columbus group, which had more voluntary WIN participants and thus more young children, was more likely to use daycare facilities and "other" arrangements. Chicago participants were more likely to take their children to the home of a friend or feel that no childcare arrangements were necessary (Table II-5).

Win usually bore the cost of childcare arrangements, and as a result, most respondents paid nothing or very little for whatever childcare arrangements they made (Table II-6).

Ethnic Background

The majority of the women participating in the study were minority group members. The ethnic composition of the groups selected to take part in the training varied by site. Eighty-one percent of the Chicago participants reported they were black, 9 percent white, and 10 percent mentioned other ethnic groups. In Columbus, 47 percent said they were black, 51 percent said white, and 2 percent mentioned other groups. Compared to the national figures for WIN registrants and job entrants, blacks are over-represented and whites and other ethnic groups are under-represented in both the Chicago and Columbus groups (Table II-7).

TABLE II-5

WHAT ARE YOUR CHILDCARE ARRANGEMENTS FOR THIS CHILD?
(In Percentages)

Childcare Arrangements	Chicago[a]	Columbus	Participant Group Total
Child taken care of in home of relative.	5	4	5
Child taken care of in home of respondent by relatives.	13	9	11
Child taken care of in home of friend.	22	11	15
Daycare.	7	21	15
Other.	13	25	20
No childcare necessary	40	29	34
	(N=55)	(N=75)	(N=130)

[a]Chi-Square=10.7; p=.50.

TABLE II-6

HOW MUCH DO YOU PAY PER WEEK FOR THESE CHILDCARE ARRANGEMENTS, IN ADDITION TO WIN PAYMENTS?
(In Percentages)

Cost	Chicago	Columbus	Participant Group Total
None	40	91	70
$20 or less.	44	5	21
More than $20.	16	5[a]	9
	(N=43)	(N=64)	(N=107)

[a]Chi-Square=32.5; p=.00.

TABLE II-7

OF WHAT RACIAL OR ETHNIC GROUP DO YOU CONSIDER YOURSELF A MEMBER?
(In Percentages)

Ethnic Group	Chicago	Columbus	Participant Group Total	All WIN Registrants 1978[a]	WIN Job Entrants 1978[a]
White, not Hispanic.	9	51	34	56	66
Black, not Hispanic.	81	47	61	39	30
Hispanic	6	0	2		
American Indian or Alaska Native	4	1	2	5	4
Other.	0	1[b]	1		
	(N=53)	(N=75)	(N=128)	(N=1,013,247)	(N=286,404)

[a]Source: WIN 1968-1979: A Report at 10 Years, The Work Incentive Program, Ninth Annual Report to Congress, U.S. Dept. of Labor, U.S. Dept. of HEW, Washington, D.C., 1979. Overall WIN statistics include both men and women.

[b]Chi-Square=27.5; p=.00.

Schooling

The average member of the participant group came close to completing high school; the mean number of years completed is 11.5. Of the 133 participants, 55 percent had completed a high school education or more. This compares with a figure of 42 percent for all WIN registrants in 1978 and 49 percent for WIN registrants who entered jobs through the WIN program, suggesting that the women participating in the Bell and Howell training are among the most highly qualified WIN registrants (Table II-8). The majority (71%) of the women assigned to the participant group who had completed at least some high school had been enrolled in a general high school program rather than a vocational or academic program.

Half of the women assigned to the participant group had been out of school for eleven years prior to the start of this study in 1978. The median year for the end of formal schooling was 1967 (Table II-8). The participant group members in Columbus tended to have finished schooling more recently than those in Chicago, corresponding to the differences in age and WIN status reported earlier. However, the differences were not found to be statistically significant.

Geographic Mobility

A rough indicator of the geographic mobility of study participants is available from a question in the interview asking for the state in which the participant last attended school. Since on the average 11 years have elapsed since the women in the study last attended school, they do not appear to be highly mobile, at least across state lines. Ninety-eight percent of the Chicago group last attended school

TABLE II-8

SCHOOLING COMPLETED BY TRAINING PARTICIPANTS
(In Percentages)

	Training Participants	All WIN Registrants 1978[a]	WIN Job Entrants 1978[a]
Years of Schooling Completed			
Less than high school.	44	58	51
High school.	39	34	39
More than high school.	17	8	10
	(N=133)	(N=1,013,247)	(N=286,404)
Type of High School Program			
General.	71		
Academic	11		
Vocational	18		
	(N=126)		
Year Finished Formal Schooling			
Prior to 1960.	12		
1960 - 1969.	41		
1970 - 1978.	47		
	(N=130)		

[a]Source: WIN 1968-1978: A Report at 10 Years, The Work Incentive Program, Ninth Annual Report to Congress, U.S. Dept. of Labor, U.S. Dept. of HEW, Washington, D.C., 1979. Overall WIN statistics include both men and women.

in Illinois and 87 percent of the Columbus group last attended school in Ohio.

Aptitude Test Scores

The GATB test scores are among the variables on which the participants from the two sites differ, with the Columbus subjects scoring higher on every exam, as shown in Table II-9. As on the GATB tests, Columbus participants scored higher on the Bell & Howell arithmetic test than Chicago participants (Table II-10), but the WIN participants scored lower as a group than the average enrollee in the Bell & Howell Schools.

The literature on the GATB tests indicates that 100 is the average score for the general working population, with a standard deviation of 20. [11] It is also suggested that persons working in electronics technician occupations like those for which these participants were being trained score 5 to 15 points higher than average. The tests and standards have not been normed for members of minority groups. The average scores for the women designated as qualified for the Bell & Howell training in this study were higher than the average 100 for the general working population and close to the normative range for electronic technicians.

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11. U.S. Department of Labor, Manpower Administration, Development of USTES Aptitude Test Battery for Electronic Technician, U.S. Training and Employment Service Technical Report s-293R, June 1970.

TABLE II-9

GATB TEST SCORES BY EXAM TYPE AND SITE, TRAINING PARTICIPANTS

	(N)	GATB: G (General Ability)					
		Percentage Whose Scores Were:					
		87 or Lower	88-100	101-112	113 or Higher	Mean Score	Standard Deviation
Chicago.	(51)	10	43	31	16	101	12
Columbus	(76)	1	30	36	33[a]	107	12
		GATB: V (Verbal)					
Chicago.	(51)	12	22	37	29	106	11
Columbus	(76)	7	28	30	36	108	13
		GATB: N (Numerical)					
Chicago.	(51)	16	29	37	18	102	17
Columbus	(76)	5	12	46	37[b]	117	11

[a]Chi-Square= 9.7; p=.02.

[b]Chi-Square=12.9; p=.01.

TABLE II-10

SCORES ON THE BELL & HOWELL ARITHMETIC TEST, BY SITE

	Chicago	Columbus	Participant Group Total
Percent of Questions Answered Correctly:			
Mean percent correct	47	54	51
Standard deviation	21	18	19
Percent of Applicants who Answered Correctly:			
73 percent or more of the questions .	12	13	13
64 - 72 percent or more of the questions.	16	26	23
44 - 60 percent or more of the questions.	32	32	32
43 percent and fewer of the questions.	40	29	33
	(N=57)	(N=76)	(N=133)

Job Histories

Virtually all training enrollees (94%) reported that they had held a job at some point in their lives, and a surprisingly large number (19%) had held jobs related in some way to electronics. By the time the opportunity for enrollment in Bell & Howell training was announced, almost all (90%) of the participants were unemployed and had been unemployed for more than six months (Table II-11). Those who were working fell within the category of low wage and/or part-time workers who earned so little that they remained eligible for AFDC and WIN services.

TABLE II-11

EMPLOYMENT STATUS OF PARTICIPANTS AT TIME TRAINING PROGRAM ANNOUNCED
(In Percentages)

Employed	10
Unemployed	90
	(N=130)
Length of Time Unemployed	
0 months	10
1 - 6 months	20
More than 7 months	70
	(N=130)

III. THE SCHOOL EXPERIENCE

As of May 1983, only one WIN-sponsored student was still enrolled in the training program. When this woman graduates, presumably in 1983, twenty-nine percent of the original group of WIN sponsored women will have completed the training program.[12] While this is a much lower completion rate than that achieved in most WIN programs, it is roughly the same as the completion rate for the regular Bell & Howell student body and for degree-oriented and performance-graded postsecondary education programs in general. This high attrition rate at the Bell & Howell schools is attributable to the academic rigor of the program and the school's rigid standards for terminating students whose attendance and achievement are unsatisfactory.

For the WIN students who have graduated, progress through the training program has not been in a smooth, lock-step fashion. In fact, fewer than half of the women have graduated on schedule; most have repeated individual courses or entire terms as a result of poor grades. Others have been suspended for poor attendance, or have dropped out voluntarily as a result of other problems, and then re-entered the program a term or two later. For some women, a twenty-month program has taken 36 months or more to complete. It is clear from our interview data that the problems faced by this population were substantial, even allowing for the women's use of these problems as excuses to justify

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12. The original group consisted of 133 individuals, 39 of whom graduated. Later in this report, data are presented for 52 graduates; these include 13 WIN-sponsored women who were not part of the original experiment, but enrolled at a later time. See Appendix B for a detailed description of the study population.

absences and poor performance which may have resulted from disinterest or lack of motivation.

Common Problems Of Participants During The Early Months Of Training Enrollment[13]

Childcare

The childcare provisions from WIN and the Separate Administrative Unit (SAU) differed in the two study sites as a result of differing state regulations. In Columbus, which conducts a number of training programs, the SAU made arrangements for childcare to be paid for by WIN for each woman in the training program. In Chicago, state regulations limited aid to 35 cents per hour for babysitting and relatives were ineligible for payment. The Chicago women experienced greater difficulty in finding reliable childcare except through non-paid relatives.

Transportation To Training

Dependable transportation was another widespread, recurring problem. This was especially true in emergencies when the normal arrangements fell through. In Chicago, public transportation was the most common means used to get to school. The location of the school (the far Northside of Chicago) in relation to transportation lines and the women's homes (especially those living on the Southside) often resulted in taking a bus to a rail line and then switching back to a bus for the

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13. Information in this section was obtained from the Phase I interview (included in the Phase I Report) and discussions with the counselors at the two training institutions.

last leg of the trip. For some women, this trip lasted one and a half hours each way. Bad weather or traffic jams extended the commuting time and late buses and trains meant missed connections and classes.

In Ohio, public transportation was not at all convenient because the nearest bus stop was nearly a mile from the school. Attempts to arrange a shuttle service between bus stop and school as part of the demonstration grant were rejected by the state WIN office. Almost all women organized rides with other WIN students or with non-WIN students who had cars. However, when the driver of the carpool was late, ill, or dropped out of the program, when the car broke down, or the WIN check for mileage arrived too late to pay for gas, the women had no way to get to class. In both sites during the demonstration program, transportation was hampered by unusually severe winter weather. Delivering the children to childcare providers also complicated transportation problems, especially since this often meant traveling in the opposite direction.

Personal Finances

The lack of financial resources affected many activities related to full school participation. Because few of the women had any savings or sources of income other than public assistance, minor problems became major obstacles. Allowances from AFDC, foodstamps, WIN and SAU were modest and required the women to plan carefully a month's expenditures and to stick to that budget. Any unanticipated need (e.g., automobile repair) required special application to the appropriate agency (which usually could only be done during school hours), and time to process the request. Any small delay in the delivery of the checks, or error in the amount of the check, caused such turmoil for the women that they

generally judged it to be more urgent to visit their caseworkers to obtain the aid than to attend classes. Of course, unwise expenses sometimes caused problems, too.

Transportation expenditures provide an example of the repercussions of the students' tenuous financial condition. WIN and other aid checks arrived monthly. Toward the end of the month, it was not uncommon for women to miss a day of school because they did not have enough money left for gas or for carfare. To solve this problem in Chicago, the school counselors arranged to sell monthly discount farecards to the women soon after aid checks arrived.

Health

Studies of WIN populations have shown this group to be healthier than the AFDC population in general. [14] One might assume then that this select group of WIN clients would be even more so. However, according to the reports of school counselors, the students' and their children's health was the most overwhelming cause of poor attendance. Although it is likely that these students, like all students, may use ill-health as a convenient excuse for missing classes, there were clear indications that health was a serious problem for some. Serious illnesses requiring major surgery and hospitalization, automobile accidents, and chronic diseases forced a number of women to miss long stretches of classes and, ultimately in some cases, to drop out of the program.

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14. Miles, Guy H. and David L. Thompson. Final Report on the Characteristics of the AFDC Population that Affect Their Success in WIN. North Star Research and Development Institute, 1972.

The health of the training participants' children and other family members also presented problems for attendance. The participants' children and other family members had more serious illnesses than would be expected in the general population. Even routine illnesses of the children resulted in missed classes because of the need for special childcare arrangements. According to the school counselors, serious illnesses became almost "common," requiring the mother to miss several weeks of classes, or to drop out for a term or more. Other women had children who required regular treatment by rehabilitation specialists or mental health therapists. These were provided by public aid, and when there were changes or disputes over their need, the women had to miss classes to discuss the problems with their caseworkers. A number of the women were also responsible for the care of other--usually elderly--family members. When such family members became ill or died, the training participants had to miss classes to make necessary arrangements.

Problems With Public Agencies

The interaction between the women and the various public agencies on whom they depend for support, and between the public agencies themselves, was not always smooth. As has already been mentioned, late checks, checks with errors, or the wrong amount of food stamps were frequent problems which affected the women's ability to pay for transportation and family care expenses.

During the project start-up, considerable effort was made to inform all relevant public agencies of the identity of the participants and to alert them to possible problems with time available for appointments with caseworkers and home visits, and to the financial arrangements to

pay for the training and support services. Unfortunately, not all agencies and caseworkers assimilated this information. For some time after the study had begun, caseworkers required the women to come to the agency for interviews during school hours, even though the women were available during other business hours. Clients who missed such appointments risked being declared ineligible for continued support. Unscheduled home visits were also made during school hours. When the women were not found at home on several consecutive occasions, the caseworker assumed the client was employed and terminated her eligibility. The women had to miss classes in order to appeal for reinstatement. Other eligibility disputes such as changes in marital status, child custody questions, and clerical errors, meant missing classes for meetings with agency officials.

The financial arrangements to pay for the program (especially the use of BEOG and Pell Grant funds which paid for a portion of the tuition) were not consistently interpreted by caseworkers. Some women found their support payments and/or foodstamps reduced as a result of the $30 a month training bonus and/or tuition support and the money for books and supplies. Some women missed classes to protest these reductions; others were reported to have become discouraged about their chances for leaving the public aid system. All these inconveniences affected their performance in the program.

There was inconsistency in the services provided women with similar eligibility requirements. The women compared the services they received, and when inequities were discovered, those receiving less negotiated for increased support, sometimes at the expense of class time. Some of these discrepancies include money given to some but not to others for car repairs, or vouchers to pay for clothing to wear

during job interviews. The amount of rental subsidies also varied widely. Some of the women developed the attitude that, if they were not being "treated right" by the agencies, they were not obliged to give the training their best effort.

Reactions Of Others To Client's Participation In The Training

The reactions of others to the women's enrollment in the training program have been an important influence on the likelihood that the women will succeed. One of the strongest findings of this study's early phases was the perceived effect the individual's participation in the training program had on her children. Sixty-two percent of the women who dropped out during the first three months felt that their children had been negatively affected by their participation, as opposed to thirty percent of those who continued their training. Negative effects included feeling attending classes and homework left too little time for the children and too little attention could be given them. On the other hand, positive effects such as: children taking school more seriously or re-enrolling in school, studying more, having more pride in their family, and respect for and better relations with their mother, were also reported.

The emotional and material support given by other family members has been almost essential for successful program completion. Help with household chores, babysitting, and providing time for and a quiet place in which to study, were important. Perhaps even more significant was family approval of the time spent away from the family to participate in a long and demanding training program for an occupation which is male-dominated. Criticisms by family members and friends about neglecting

family responsibilities, harming one's children, and acting inappropriately for a woman, deeply affected some of the women. In a few cases, these remarks escalated to threats or incidents of violence from husbands and boyfriends.

School-related Problems

The introduction of the women to an established training institution with a white, male, lower- to middle-income student body, was not always smooth. The WIN clients reported numerous instances of racial, sexual, and anti-welfare prejudicial remarks from students and faculty members, although most of these occurred during the first few months. Complaints of inequitable treatment based on sex or race by the faculty continued sporadically, but were not substantiated.

Problems Induced By The Program Evaluation

The demonstration project was rushed into existence. As a result, the selection procedures for participants may have been poorly implemented. In addition, the evaluation aspect of the training program made it necessary to identify a large number of qualified clients to assure sufficiently large training and comparison groups. The demand strained, and in some cases overwhelmed, the system within the WIN offices for selecting participants, which resulted in incomplete screening, lowering the qualification criteria, and pressure on some clients to volunteer for the program. [15] These factors have

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15. See White and Weidman, 1983. "Doing Evaluation Research for Public Agencies: Problems with the Assignment of Clients to Experimental and No-Treatment Control Groups in Field Experiments." Sociological Practice, Vol. 4, No. 2, 1983.

undoubtedly contributed to the dropout rate.

A Comparison Of Dropouts And Program Graduates

This section of the report presents a comparison of the background characteristics of the fifty-two program graduates and the ninety-seven women who have dropped out of the training program for whom we have data. [16] The background characteristics used in the analyses include entrance test scores, employment history, family situation and demographic characteristics. The two groups of women are also compared on their experiences while enrolled in the training program, including health and other problems, and changes in family status.

Demographic Characteristics

Age. The distribution of the ages of the dropouts and graduates at the time they first enrolled in the training program is shown in Table III-1. The mean age for both dropouts and graduates was twenty-nine. Ages of dropouts ranged from eighteen to fifty-four; ages of graduates ranged from nineteen to forty-eight. The differences in the distribution of ages are not statistically significant.

Ethnic group. The distribution of dropouts and graduates by ethnic group is shown in Table III-2. There is little variation between the two groups and the differences are not statistically significant. There

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16. The graduate group includes 39 women who were members of the original study population and 13 WIN-sponsored women who were not recruited during the study intake periods, but entered the program later and graduated in February 1981. The data collected during the initial client selection process and the Phase I interview are not available for these additional thirteen women. Hence they are not included in all of the tables for this section. In no instance are the tabled associations between variables changed substantially by the inclusion of the 13 additional clients.

TABLE III-1

AGE OF PROGRAM GRADUATES AND DROPOUTS[a]
(In Percentages)

Age	Graduates	Dropouts
18 -21	8	7
22 - 25	20	29
26 - 30	36	33
31 - 35	18	20
36 - 40	10	5
41+	8	6
	(N=39)	(N=94)

[a]Table includes only originally selected program participants.

TABLE III-2

ETHNIC GROUP OF PROGRAM GRADUATES AND DROPOUTS[a]
(In Percentages)

Ethnic Group	Graduates	Dropouts
White (Non-Hispanic)	28	36
Black (Non-Hispanic)	69	58
Other	3	6
	(N=39)	(N=92)

[a]Table includes only originally selected program participants.

is a slight tendency for whites and the "other" group to be overrepresented in the dropout group.

Education

Years of previous education completed. At the time of their selection for the training program, the average number of years of schooling completed by all members of the participant group was 11.5 years. The average for those who had completed the program was 11.6 years, while for dropouts the average was 11.5 years. The distribution of years of prior education is shown in Table III-3.

Type of high school program. Table III-4 shows the distribution of dropouts and graduates by the type of high school program in which they had been enrolled. Those who had been enrolled in general high school programs were considerably more likely to graduate than those who had been enrolled in vocational programs, with roughly equal proportions of those in academic programs graduating and dropping out of the training. Since only 11 percent of the total study population had been in an academic high school program, it is difficult to make any generalizations about this group. It may be that those enrolled in vocational programs are students who have shown a greater work orientation. Thus, one interpretation of the results would be that the dropouts from the training program who had been in high school vocational programs are those who prefer to work over being in an academic or training setting. It is also not clear whether students enrolled in "general" programs obtain a more rigorous high school education, especially more math and science classes, than those in "vocational" programs. This issue is addressed in the next section of this chapter.

TABLE III-3

YEARS OF PREVIOUS EDUCATION COMPLETED[a]
(In Percentages)

Years of Previous Education Completed	Graduates	Dropouts
Less than high school.	41	46
High school.	36	40
More than high school.	23	14
	(N=39)	(N=14)

[a]Table includes only originally selected program participants

TABLE III-4

TYPE OF HIGH SCHOOL PROGRAM ATTENDED[a]
(In Percentages)

Type of High School Program	Graduates	Dropouts
General.	84	66
Academic	8	12
Vocational	8	22
	(N=37)	(N=92)

[a]Table includes only originally selected program participants.

Coursework in Science and Mathematics. In the Phase II interview, all respondents were asked whether they had completed one or more courses in specified areas of advanced math or in one or more of the natural sciences. Table III-5 shows the results for graduates and dropouts. It is interesting to note that the biggest differences are not in algebra and physics, which might be assumed to be most directly relevant to electronics training, but rather in geometry (the only statistically significant difference) and chemistry. This suggests that courses in more analytical math and science areas provide more useful skills for completion of this sort of training.

Table III-6 shows the average number of the four specified areas of math and science in which the women in the study had completed at least one course. On the average, graduates had taken courses in more areas than dropouts, although a quarter of both the graduates and dropouts had taken no courses in these areas.

Prior Work Experience

Ninety-six percent of program graduates and eighty-eight percent of dropouts had held at least one paid job at some time prior to the beginning of the training program (Table III-7). The members of both groups had held an average of five different paid jobs prior to the training program. Forty five percent of graduates and forty-one percent of the dropouts held a paid job during the year prior to the training program. Study participants were also asked whether they had ever held an electronics related job. Table III-7 shows that slightly more dropouts (22%) than graduates (16%) reported they had held such a job.

TABLE III-5

PREVIOUS COURSEWORK IN MATHEMATICS AND SCIENCE[a]
(In Percentages)

Percent of Women Who Prior to the Start of this Training Program had Completed at Least One Course in:	Graduates	Dropouts
Math		
Algebra	62	58
Trigonometry	12	12
Geometry	50	29[b]
Calculus	3	5
	(N=32)	(N=79)
Science		
Biology	77	78
Chemistry	29	16
Physics	18	21
Geology	13	12
	(N=31)	(N=79)

[a]Table includes only originally selected program participants.

[b]Chi-Square=4.4; p=.04.

TABLE III-6

NUMBER OF SCIENCE AND MATH COURSEWORK AREAS[a]
(In Percentages)

Number of Science and Math Coursework Areas	Graduates	Dropouts
None	33	28
One Science or Math Area	15	22
Two Science or Math Areas	8	20
Three Science or Math Areas	18	10
Four Science or Math Areas	10	10
Five or More	16	10
	(N=39)	(N=97)
Average Number of Courses Taken	2.2	1.9

[a]Table includes only originally selected program participants.

TABLE III-7

PRIOR WORK EXPERIENCE[a]
(In Percentages)

Work Experience	Graduates	Dropouts
Ever held a paid job?		
Yes	96	88
No	4	12
	(N=38)	(N=85)
Held paid job in previous year?		
Yes	45	41
No	55	59
	(N=38)	(N=85)
Ever held an electronics related job?		
Yes	16	22
No	84	78
	(N=38)	(N=85)

[a]Table includes only originally selected program participants.

Public Assistance Experience

Table III-8 shows that graduates were slightly more likely to have been enrolled in the WIN program for a longer period of time than dropouts. Graduates were also somewhat more likely to be mandatory WIN participants, suggesting that having older children (and presumably fewer childcare demands) is related to success in the program. This argument is supported to some extent by the description of family structure presented in a later section.

Graduates were more likely than dropouts to have worked and received public assistance at the same time. This suggests that the graduates are women who were less satisfied than dropouts with the life style afforded solely through public assistance, although it is also true that because their children are older on the average, they are in a better position to engage in work because they tend to have fewer childcare problems.

The women in this study were asked about the economic circumstances of their families while growing up. Table III-9 shows that dropouts were slightly more likely to have come from families which had been on public aid. However, neither group contains a large portion of second generation welfare recipients.

At the time the training program began, graduates and dropouts were about equally likely to have persons who were not receiving some form of public assistance as their friends (Table III-10).

TABLE III-8

PUBLIC ASSISTANCE EXPERIENCE[a]
(In Percentages)

Public Assistance	Graduates	Dropouts
Years Enrolled in the WIN Program at Time Training Began		
Less than one year	73	82
One to two years	19	13
Three or more.	8	5
	(N=37)	(N=67)
WIN Status at Time Training Began		
Mandatory.	65	59
Voluntary.	35	41
	(N=37)	(N=69)
Percentage of Women Who Previously Worked and Received Public Assistance at the Same Time		
Worked and received public assistance. . .	23	11
Never worked and received public assi assistance	77	89
	(N=39)	(N=97)

[a]Includes only originally selected program participants.

TABLE III-9

PUBLIC ASSISTANCE STATUS OF PROGRAM PARTICIPANTS' FAMILIES WHEN GROWING UP[a]
(In Percentages)

Proportion of Women Who Grew Up in Welfare Families	Graduates	Dropouts
Family was never on public aid.	69	63
Family was on public aid less than half the time while growing up	17	20
Family was on public aid more than half the time while growing up	14	17
	(N=32)	(N=79)

[a]Table includes only originally selected program participants.

TABLE III-10

PROPORTION OF FRIENDS ON PUBLIC ASSISTANCE[a]
(In Percentages)

Proportion of Friends at the Time the Program Began Who Were on Some Form of Public Assistance	Graduates	Dropouts
All	3	7
Almost all	16	4
About half	6	8
Some	52	50
None	23	31
	(N=31)	(N=76)

[a]Table includes only originally selected program participants.

Family Characteristics

Table III-11 shows that there was little initial difference in the marital status of program graduates and dropouts. Table III-12, however, shows that graduates experienced more changes in marital (or dating) status than dropouts did during the time they were enrolled in the training (although this may just reflect the shorter time period that dropouts were enrolled in the program).

There was virtually no difference in the family size of graduates and dropouts, although a larger proportion of graduates had four or more children (Table III-13). However, the average number of children was practically the same for the two groups (2 children). The children of graduates were also slightly older at the time the program began than the children of women who dropped out of the program (Table III-14). The average age of the youngest child was 8.6 years for dropouts and 9.0 years for graduates. During the time the two groups were enrolled in the training, three of the graduates (7%) and four of the dropouts (5%) reported they had given birth to another child.

Academic Qualifications

As part of the process used to select the women to take part in the training, each potential participant was required to take a series of qualification tests, including the GATB series, a test of reading level and an arithmetic test which had been designed by Bell & Howell. The only statistically significant difference between graduates and dropouts was found in the scores achieved on the GATB:G ("general aptitude") scale. On the average, however, graduates scored higher on each test (Table III-15).

TABLE III-11

MARITAL STATUS AT BEGINNING OF PROGRAM[a]
(In Percentages)

Marital Status at Beginning of Program	Graduates	Dropouts
Married and living with husband.	0	5
Married but not living with husband.	26	25
Divorced	38	33
Never married.	36	37
	(N=39)	(N=93)

[a]Includes only originally selected program participants.

TABLE III-12

CHANGES IN MARITAL STATUS DURING PROGRAM[a]
(In Percentages)

Women Experiencing Each Kind of Status Change	Graduates	Dropouts
Was married.	9	2
Was divorced	16	9
Was separated.	3	6
Ended separation	3	3
Found or lost boybriend.	40	22
	(N=32)	(N=79)

[a]Table includes only originally selected program participants.

TABLE III-13

NUMBER OF CHILDREN AT START OF TRAINING PROGRAM[a]
(In Percentages)

Number of Children at Start of Training Program	Graduates	Dropouts
1.	28	30
2.	31	33
3.	18	22
4 or more.	23	15
	(N=39)	(N=94)
Average	2.3	2.3
Range	1-8	1-7

[a]Includes only originally selected program participants.

TABLE III-14

AGE OF YOUNGEST CHILD AT START OF TRAINING PROGRAM[a]
(In Percentages)

Age	Graduates	Dropouts
6 years old or younger	44	37
7 to 12 years old.	33	40
13 to 16 years old	10	18
17 years old or older.	13	5
	(N=39)	(N=86)
Average	9.0	8.6
Range	0-29	0-26

[a]Table includes only originally selected program participants.

TABLE III-15

AVERAGE SCORES ON QUALIFICATION TESTS[a]

Tests	Graduates	Dropouts
GATB: G	106.7	103.8[b]
GATB: V	105.9	107.2
GATB: N	107.6	105.9
Reading	10.1	9.6
Arithmetic	54.8	50.0
	(N=37)	(N=93)

[a]Includes only originally selected program participants.

[b]G-Square=66.8; P=.01.

The staff of the training institutions used the arithmetic test scores to determine whether a woman qualifying for the training had first to complete a remedial term (referred to as "prep") or could be admitted directly to the first term of the technician training program. A student was assigned directly to the technician training program if she scored above eighty percent on the arithmetic test. If she scored lower on the arithmetic test but had at least a tenth grade reading level she was enrolled in the "prep" training. Thirty-seven percent of the women in the demonstration program were admitted directly into the technician program and the remaining sixty-three percent began with the remedial term.

The assignment to the "prep" or "tech" term turned out to be significantly associated with successful completion of the program. While forty-four percent of those responding to the Phase II interview who graduated started in the "prep" course, sixty-six percent of the dropouts entered training in the "prep" course (Table III-16).

Another factor which was strongly associated with successful completion of the training program was the match between a client's preference for training or immediate employment and her enrollment in a training program. As part of the Phase I interview, each client was asked at the time the training began whether she preferred a job that began right away or some kind of training. Only eighteen percent of the women who started the training indicated that they would have preferred a job, but as shown in Table III-17, these women were much less likely to complete the program than the women who preferred training. The most common reason given by these women for enrolling in training despite their preference for obtaining employment was that they couldn't get a job or that WIN had not been able to find a job for them.

TABLE III-16

INITIAL ENROLLMENT IN REMEDIAL COURSE
(In Percentages)

Initial Enrollment	Graduates	Dropouts
Remedial course (Prep)	44	66
Tech I	56	34[a]
	(N=45)	(N82)

[a]Chi-Square=4.24; p=.04.

TABLE III-17

INITIAL PREFERENCE FOR EMPLOYMENT OR TRAINING[a]
(In Percentages)

Initial Preference	Graduates	Dropouts
Employment	5	24
Training	95	76[b]
	(N=39)	(N=88)

[a]Table includes only originally selected program participants.

[b]Chi-Square=5.2; p=.02.

Training Program Experiences

Both the Phase I and Phase II instruments contained items which asked respondents to describe their experiences while enrolled in the training program. Several of the differences presented below on items contained in the Phase II instrument must be qualified in terms of the length of time the individuals were actually enrolled in the training program. Table III-18 shows the differences in the distributions of the number of months dropouts and graduates attended the training. Because a minimum of twenty months was required to complete the program, no graduate was found to have attended for fewer months, and the median time of attendance was twenty-four months. For dropouts there was, of course, no minimum period of attendance. While some were enrolled for more than twenty months, more were enrolled for only a month or two. The median duration of attendance for dropouts was seven months. It is clear that graduates had much more opportunity for various problems, behaviors and experiences to occur.

Expectations. Some impressions of the program which show differences between those who eventually graduated and those who did not were gathered in the Phase I interview, which took place before more than a few individuals had dropped out. One area of the Phase I instrument asked whether certain aspects of the school experience met the expectations the women held for the training program. For example, Table III-19 shows that women who felt the early coursework was more difficult than expected were slightly less likely to graduate than those who felt the coursework was less difficult or as difficult as expected. Similarly, those who felt that the first months of the training program made more demands on their time than expected were less likely to

TABLE III-18

NUMBER OF MONTHS ENROLLED IN THE BELL & HOWELL PROGRAM
(In Percentages)

Months Enrolled	Graduates[a]	Dropouts[b]
1 - 5	0	40
5 - 10	0	27
11 - 19	0	27
20 - 22	23	2
25 - 30	12	0
More than 30	17	1
	(N=47)	(N=93)
Median	24 months	7 months
Range	20-40 months	1-33 months

[a]For graduates, the number of months is calculated as the elapsed time between first enrollment and graduation.

[b]For dropouts, the number of months is calculated as the actual number of months in which the respondent was enrolled, disregarding the months between multiple enrollments for those who dropped out more than once.

TABLE III-19

EARLY EXPERIENCES IN THE PROGRAM COMPARED TO EXPECTATIONS[a]
(In Percentages)

Experiences	Graduates	Dropouts
Difficulty of Coursework		
More difficult than expected	22	29
As difficult as expected	56	55
Less difficult than expected	22	16
	(N=36)	(N=62)
Program Demands on Time		
More time than expected.	39	59
As much time as expected	39	30
Less time than expected.	22	11
	(N=36)	(N=54)
Helpfulness of Family		
More helpful than expected	37	26
As helpful as expected	50	55
Less helpful than expected	13	29
	(N=38)	(N=58)
Friendliness of Non-WIN Students		
More friendly than expected.	53	40
As friendly as expected.	44	57
Less friendly than expected.	3	3
	(N=36)	(N=60)
Helpfulness of Teachers		
More helpful than expected	60	39
As helpful as expected	32	34
Less helpful than expected	8	27[b]
	(N=37)	(N=62)

[a]Table includes only originally selected program participants.

[b]Chi-Square=11.8; P=.003.

graduate than those who felt the time demands were as expected or less. Those who felt that their families were more helpful than expected were more likely to graduate than others.

Two areas which are addressable to some degree by the training institutions (and in which modifications have been made since the Phase I interviews) are the perceived helpfulness of the instructors and the friendliness of the non-WIN students. There was a slight but not statistically significant tendency for those who felt that non-WIN students were more friendly than expected to graduate more often than those who felt the other students were less friendly. However, the women who felt the teachers were more helpful than expected were significantly more likely to graduate than those who felt the teachers were as helpful or less helpful than expected.

Effect on Children. Another aspect of the school experience on which the two groups differed was the early perceptions by the mother of whether her enrollment in the training was having a positive or negative affect on her children. Table III-20 shows that graduates were slightly more likely than dropouts to feel that their enrollment in the training program was having a positive effect on their children, such as the child beginning to study more or returning to school; or becoming proud of and showing more respect to the mother. The negative effect most often listed by both dropouts and graduates was that the mother had less time for her children.

Attendance. There were also some differences in attendance during the early weeks of the program. While nearly every women missed some classes, the average number of classes missed between the start of the program and the Phase I interview was sixteen for graduates and eighteen

TABLE III-20

PERCEIVED EFFECT OF MOTHER'S ENROLLMENT IN PROGRAM ON HER CHILDREN[a]
(In Percentages)

Effect	Graduates	Dropouts
Positive	72	63
Negative	28	37
	(N=29)	(N=30)

[a]Table includes only originally selected program participants who indicated that their enrollment in the training had an effect on their children.

for dropouts. The most common reasons given for absences were the respondent's health, transportation and childcare problems.

Problems Encountered. In the Phase II interview, the graduates and dropouts were asked to indicate whether each of a series of potential problems for staying in the program had actually posed a serious problem for them. As shown in Table III-21, dropouts were significantly more likely to respond that transportation, their own health and the difficulty of the work required were problems for them. Interestingly, the graduates were significantly more likely to respond that personal finances had been a serious problem for them.

Other items in the interviews elicited more detailed information on transportation, but they shed little light on the reasons dropouts had seen transportation as such a problem. The dropouts did not differ significantly from the graduates in the distance, time, cost or means of commuting from home to the training.

More detailed information was also collected on the respondent's health. Nearly the same proportion of each group reported that an illness had caused them to miss a class. However, dropouts who were ill reported twice as many instances of illness (an average of 3.6) as did graduates (2.0) and graduates were more likely to report illnesses which did not require surgery or hospitalization.

Support Networks. Another area of the school experience which was explored in the Phase II interview was the existence of in-school support networks for the women. Here again there were few differences between the two groups of women. Dropouts and graduates were about equally likely to report that the WIN women formed a support group and to feel that they were part of that group. They were also about equal in the frequency with which they went to the special school counselor

TABLE III-21

PROBLEMS ENCOUNTERED IN STAYING IN THE PROGRAM
(In Percentages)

Problems	Graduates			Dropouts		
	Serious Problem	Somewhat of a Problem	No Problem	Serious Problem	Somewhat of a Problem	No Problem
Transportation[a]	9	49	42	21	30	49
Clothing	13	16	71	9	20	71
Child Care	9	22	69	13	20	67
Respondent's Health[a]	7	9	84	13	23	64
Health of Child, Other Family Members	8	22	70	12	22	66
Difficulty of Coursework[a]	0	54	46	18	43	39
Personal Finances[a]	41	34	25	20	28	52
Emotion Problems	11	27	62	16	21	63
		(N=52)			(N=97)	

[a]Chi-Square, p=.05.

for the WIN students for advice and both groups rated the counselors favorably.

Interaction with Non-WIN Students. Graduates were slightly more likely than dropouts to have laboratory partners who were not other WIN students and to have a larger portion of their friends at school who were not WIN students. When asked to indicate the importance of various sources of support (Table III-22), more graduates than dropouts ranked each source as very important except for the school faculty and administration. The difference in the number of women listing non-WIN students as very important is statistically significant.

Graduates were more likely to see both WIN and non-WIN students at social activities outside of school (Table III-23), with the difference in reports of seeing non-WIN students statistically significant.

Graduates were also significantly more likely to join a school sponsored club or student government than dropouts (Table III-24), although this may simply reflect the increased opportunity afforded by the graduates longer time in the program.

Studying. On the average, dropouts reported studying more hours per week (16) than graduates (14.5), perhaps an indication of the greater difficulty some were having in assimilating the materials. Most respondents in both groups did most of their studying alone. However, graduates were significantly more likely to have come into the school laboratory on their own time to do extra work or studying (Table III-25).

TABLE III-22

IMPORTANCE OF SOURCES OF SUPPORT IN HELPING RESPONDENTS COMPLETE TRAINING
(In Percentages)

Support	Graduates			Dropouts		
	Very Important	Somewhat Important	Not Important At All	Very Important	Somewhat Important	Not Important At All
Family.	69	27	4	54	34	11
Friends Outside School.	29	40	31	22	34	44
WIN Students.	46	36	18	36	44	20
Non-WIN Students[a]	42	40	18	19	47	34
WIN Student Counselor	65	21	14	57	33	10
School Faculty and Administration	47	42	11	57	31	12
		(N=45)			(N=79)	

[a]Chi-Square=8.7; p=.01.

TABLE III-23

INTERACTION WITH STUDENTS OUTSIDE OF SCHOOL
(In Percentages)

Interaction	Graduates	Dropouts
Ever See Non-WIN Students Outside of School?		
Yes	66	48
No	34	52[a]
	(N=47)	(N=83)
Ever See WIN Students Outside of School?		
Yes	76	60
No	24	40
	(N=45)	(N=79)

[a]Chi-Square=3.8; p=.05.

TABLE III-24

PARTICIPATION IN STUDENT CLUBS OR STUDENT GOVERNMENT
(In Percentages)

Participation	Graduates	Dropouts
Student Clubs or Government		
Participated	44	16
Did not participate.	56	84[a]
	(N=45)	(N=79)

[a]Chi-Square=11.5; p=.001.

TABLE III-25

USE OF OWN TIME TO COME TO SCHOOL LAB TO STUDY OR DO EXTRA WORK
(In Percentages)

Use of Own Time at School	Graduates	Dropouts
School Lab		
Came on own time	91	54
Did not come on own time	9	45[a]
	(N=45)	(N=80)

[a]Chi-Square=16.6; p=.00.

Experiences Outside Of School

Items concerning experiences outside of the training program were also asked during the Phase II interview. These events appear to be rather strongly related to the aggregate likelihood of completing the program, but all the opposite direction of what would be expected. Reflecting their longer time in the training program, graduates were much more likely to experience each sort of problem (Table III-26). Late public aid or WIN checks as well as checks for the wrong amount were the most common events. This suggests a particular resourcefulness and resilience on the part of graduates that seems to have enabled them to overcome the obstacles placed in their way by the welfare system.

Summary

The preceding analysis of the gross differences between graduates and dropouts did not lead to the identification of many factors clearly associated with successful training completion.

The search for effective screening criteria might be tempered by the realization that most of the women who dropped out of this program did so quite early. Forty-three percent of the dropouts left without completing a single term of the technician program, and an additional twenty-one percent completed only the first term. The group of women described in this report as dropouts could be divided into two groups: dropouts and screening failures, women who really didn't get started in the program. However, since these women were in the program for so short a period, the cost of the existing inefficiencies in the current screening procedures is relatively low both in terms of training expense and in the waste of training slots for more appropriate clients.

TABLE III-26

PROBLEMS EXPERIENCED OUTSIDE OF THE TRAINING PROGRAM
(In Percentages)

Problem Experienced	Graduates	Dropouts
Victim of crime.	31	19
Moved.	40	29
Late public aid or WIN checks[a]	76	21
Checks for the wrong amount[b]	47	22
Problems with food stamps.	36	20
Controversy over eligibility for WIN, AFDC, food stamps.	36	21
Unsatisfactory WIN provided child care . .	34	22
	(N=45)	(N=79)

[a]Chi-Square=35.2; p=.00.

[b]Chi-Square= 8.3; p=.00.

The present analysis identifies a few characteristics which could easily be incorporated into screening procedures. These include qualification scores, high school background, direct entry into the Tech program at the Bell & Howell School, and preference for training as opposed to finding immediate employment.

With respect to qualification scores, graduates had a significantly higher GATB:G score than dropouts. This suggests that this Employment Service aptitude test is a potentially effective screening instrument for female WIN clients entering similar training programs in the electronics field. Hence, GATB:G scores could be used as one criterion for determining which WIN clients should be referred to this type of training program and which clients should be referred to other training or employment opportunities. The originally determined GATB:G score of 90 for training referral seems reasonable since the only lower score attained by a graduate was 89. A GATB:G score closer to 100 would be a better criterion for referral, but that would reduce even more the already small proportion of the WIN population who might qualify for such rigorous training.

Graduates tended to have a different high school background than dropouts. While roughly equal proportions of the small number of program participants who were in academic high school programs graduated from and dropped out of the training, clients who had been in general high school programs were substantially more likely to graduate than those who had been in vocational high school programs. In addition, graduates were significantly more likely than dropouts to have taken geometry and chemistry courses in high school. This suggests that high school curriculum rather than simply attainment of a diploma or GED could be used as a selection criterion.

The significant difference in the rate of completion of the program between those who were admitted directly into the technician training program and those required to take the remedial "prep" term suggests that the remedial term be examined for ways to improve the preparation given for the main training program (and in fact the training institutions have greatly changed the structure and content of this term since the demonstration group first enrolled). There is some anecdotal evidence (presented in more detail in the Phase I Report) that the structure and content of the "prep" term as it then existed may have contributed to the dropout rate, and the schools have considerably altered the remedial training offered. The "prep" term was criticized for the discontinuity between the individualized modules used in this term and the lecture and laboratory structure used for the remainder of the technician program. The similarity of the "prep" coursework with that experienced in high school, the impression that "prep" courses were much less difficult, and the self-pacing of progress through the "prep" term which led to poor attendance habits, were all mentioned as aspects of the "prep" course which fostered inappropriate expectations and behavior for the successful transition to the technician program.

The finding that dropouts tended to be more "job-oriented" than graduates suggests two more aspects of the "prep" program which may have contributed to the attrition rate. First, being required to complete this term added fifteen weeks to the minimum time required to complete the training, which meant that the payoff of this training in the labor market was at least two years away from its start. Second, the "prep" term is the least "job-like" term. In one of the settings it involved no benchwork, and it was reported that in neither setting was there much use or discussion of the everyday tools and activities of an electronics

technician. It could be that both of these factors dramatically decreased the attractiveness of the training program for a person who was more "work" than "school" oriented.

The preference of individuals for training over immediate placement would also seem to be an effective criterion for screening women for this program. The effectiveness would be increased to the degree that alternate immediate placement opportunities exist as this would remove the incentive for hiding one's true preferences.

The remainder of the findings in this analysis support a portrait of graduates having three characteristics which would be difficult to measure during the screening process but whose use (if appropriate indicators could be devised) might further reduce the attrition rate. One is the motivation to complete the program and to leave the welfare system. The importance of this factor is suggested by the trends for graduates to have worked while receiving public assistance; their perception of and, implicitly, capacity to overcome greater financial difficulties while on public assistance; and their willingness to come to the school to work or study on their own time.

A second element is a positive early impression of the training and its effects on their families. At the time of the Phase I interview, graduates found the faculty to be much more helpful than they had expected, and did not feel the difficulty of the coursework was much of a problem for them. They were also significantly more likely to have noticed that enrollment was having an effect on the children (and that these effects were either positive or the expected decrease in time for interaction).

Finally, the graduates reported more contact with the non-WIN students at the training institution. They were more likely to join a club or student government, more likely to see non-WIN students outside of school and more likely to include non-WIN students as an important source of support in completing the program. These differences may simply reflect the differences in time of exposure to the program and the non-DOL students, as discussed earlier. But possibly, this suggests that graduates were either the women who possessed social skills and values which were similar to those of the non-WIN students and this fostered interaction, or that the graduates were women who, when brought into contact with the non-WIN students by course requirements, quickly assimilated their orientations.

IV. INITIAL LABOR MARKET EXPERIENCE OF PROGRAM GRADUATES

The data for this portion of the report were derived from Phase II interviews, Phase III interviews, and placement reports prepared by the WIN counselors at the Bell & Howell schools. Since most of those whose initial placement status was ascertained had graduated prior to September 1981, the information in this chapter largely parallels data included in a previous report. [17] This earlier information is included in this report for the convenience of the reader, together with additional material from the more recent, Phase III interviews and from other sources. Not all items of information are available for all graduates.

Initial Placement Status

We have been able to determine the initial placement status of forty-eight of the fifty-two study participants who had graduated from the electronics technician training program as of February, 1982. Thirty-four of the forty-eight (71%) were successful in obtaining employment after graduation while fourteen (29%) had not secured a job by the time of their Phase III interview in late fall 1982. As Table IV-1 indicates, the rate of job placement was appreciably higher in Chicago than in Columbus. This difference may reflect a relative scarcity of electronics-related jobs in the Columbus area, combined with reluctance on the part of many graduates to relocate.

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17. White, Richard N. Assessment of a WIN Quality Training Demonstration Project, Phase II Report--Training and Early Placement Experiences. Bureau of Social Science Research, April 1982.

TABLE IV-1

INITIAL JOB PLACEMENT OF GRADUATES BY SITE
(In Percentages)

Placement	Chicago	Columbus
Secured job.	80	61
Unsuccessful in finding job.	20	39
	(N=25)	(N=23)

All of the fourteen women who had not yet obtained a job stated in their Phase III interviews that they had actively looked for employment since graduation. In the case of at least five of these women, the intensity of their efforts must be questioned because these five cited aspects of their personal situations which had made it difficult or impossible for them to work at a full-time job at some time since graduation. Their own health, problems with their children, lack of work experience, and lack of transportation were the problems cited. Thirteen of the fourteen reported that they were looking for work at the time of their Phase III interview. The fourteenth stated that she planned to start looking again in 1983 when problems with her children would presumably be resolved.

Job Search Activities

Information obtained from the graduates about the length of time spent looking for their first job after graduation suggests that those who were successful in obtaining jobs found them rather quickly. Sixty-eight percent started their jobs within a month of graduation while another nineteen percent found work one to three months after graduation. The remaining thirteen percent searched for four to seven months before finding employment.

The speed with which these jobs were obtained can be attributed in large part to the job placement activities underway at the Bell and Howell training schools during the last trimester of the training program. Many of the women who found work did so before they had actually graduated.

The importance of the Bell & Howell placement activities was highlighted by the graduates' responses to questions about the early phases of their job search activities in the Phase II interview. At that time the graduates reported that, on the average, they had interviewed with twelve different firms and that nine of those interviews had been arranged by the school placement office. (According to their responses, they themselves had taken the initiative in arranging most of their other interviews by following up newspaper ads, walking into employment offices, etc.)

At the time of the Phase II interview, nineteen of the graduates had received at least one job offer. Those who had received a job offer by that time had had a slightly larger average number of interviews (14) than had those who had not yet received an offer (11). Nine of those who had received an offer at that time reported receiving only one offer while ten received two or more. Sixteen of the nineteen had decided to accept an offer. Three-quarters of those who had accepted a job at the time of the Phase II interview indicated that the job had been found through the school placement office.

In contrast to the relatively short searches for initial jobs reported by those who were successful in finding work, those who have been unsuccessful report significantly longer searches. Since graduation, these women have spent an average of fifteen and one-half months looking for employment. These searches have ranged from the two months reported by an October, 1981 graduate of OIT who was incapacitated in an accident two months after graduation and who resumed her search in 1983, to the 24 months spent by two October, 1980 DeVry graduates. During the course of their efforts to find work, the fourteen who have been unsuccessful thus far have had an average of ten

interviews. Four have had no interviews at all. They attribute their failure to get even that far to their lack of work experience and academic degrees and to the fact that "no work was available." When asked whether there was any additional assistance they would have liked from the school or WIN to help in finding a job, five of the fourteen responded affirmatively. The types of assistance they specified included help in sending out resumes, and arranging for more employers to come to the school to interview.

Preferred Job Characteristics

Table IV-2 presents a list of job characteristics. During the Phase II interview, each graduate was asked to rate the importance she had attached to each characteristic in selecting a job, using a four-point scale ranging from "very important" to "not important at all." The ranking of each characteristic is based on the percentage of women indicating that the characteristic was very important. The table also indicates how graduates felt that the jobs for which they had interviewed met those preferences.

Some aspects of the responses deserve attention. The first is the importance attached to "intrinsic" job characteristics (e.g., opportunity in the field of training) as opposed to "extrinsic" characteristics (e.g., type of dress, shift, location). This can be interpreted to show a strong career orientation and long-term perspective when beginning the job search process.

However, in the context of the graduates' actual job search behavior, these "extrinsic" factors, and especially location, assume great importance. The explanation for these apparently contradictory findings may lie in one of three sources. First, expressed preferences

TABLE IV-2

INITIAL JOB CHARACTERISTIC PREFERENCES AND THE PERCENT OF GRADUATES WHO FELT THE JOBS THEY INTERVIEWED FOR USUALLY MET EACH CONDITION
(In Percentages)

Job Characteristics	Characteristic Listed As Very Important	Perception that Jobs Interviewed for Usually Met This Condition
Steady and permanent.	85	100
Opportunity for advancement and promotion	83	90
Extensive medical insurance	73	94
In the field of electronics	70	100
Pay a minimum wage set by student[a]. . . .	68	68
Offers further training in electronics.	60	87
Sick leave and vacation	33	97
Opportunity for overtime.	25	77
Convenient to current home.	23	19
Offer training in other fields.	18	35
Allow informal dress.	18	73
Require no late shift	15	48
Does not require union membership . . .	5	62
Friends work for same company	0	16
	(N=33)	(N=33)

[a]Respondents were asked if they had a minimum wage in mind; the percentage given is based on number answering 'yes.' Minimum wage amounts ranged from $10,400 to $16,640 per year.

may be a poor predictor or actual behavior. Second, the women were asked to give their preferences at the time when they first started their job search. Thus, their answers may reflect what they felt were appropriate and expected priorities. Once the women were actually engaged in job selection and were forced to consider how various aspects fit with the other demands and responsibilities they were subject to, extrinsic factors may have assumed increased importance. Finally, Table IV-2 shows that nearly all of the women found that most of the jobs for which they interviewed met those "intrinsic" conditions which were most important to them. This may have focused attention on some of the extrinsic factors and made them more salient. (Comparing the responses to these questions of those who had received a job offer by the time of the Phase II interview with those who had not received an offer produced no dramatic differences.)

Problems During The Job Search

At the time of the Phase II interviews, fifty-one percent of the women stated that searching for a job had been more difficult than expected while eighteen percent found it less difficult than expected. (Not surprisingly, those graduates who had already received a job offer by the Phase II interview were less apt to have found the search more difficult than they had expected (31%) than were those who had not received an offer at that time (63%).) Other differences from expectations included disappointment that the training didn't guarantee a job and that the job search process took so much time from classes during the last trimester. Some differences from expectations were positive, however, including surprise at the variety of jobs available; surprise that such definite, distinct positions were available; surprise

that the school provided many services the respondents believed they would have to provide for themselves; and, surprise at the availability of a professional placement service.

On balance, the data suggest that the graduates (and the WIN and Bell & Howell personnel who coached the women in preparation for job hunting) had probably underestimated the problems encountered in the job search process and the practical and psychological consequences of the unanticipated difficulties. Thus, fifty-six percent of the women reported that something happened during the interviews which made them less confident of their ability to get and/or hold a job. Among the incidents were: the discovery that employers wanted more "hands-on" experience; the discovery that employers had higher standards than expected; the discovery that some employers wanted only "A" students; difficult employer tests containing unfamiliar material; and, perceived discrimination based on sex or "looks." The women reported that as a result of these incidents they felt inadequate and discouraged and signed up for fewer interviews.

A list of basic problem areas brought up in conversations with Bell & Howell personnel would include:

Low Grade Point Average

Although some of the women in the demonstration program were honor students, on the whole, their grade-point average was lower than that of the regular training graduates with whom they were competing for jobs. Some company recruiters screen the graduates they interview by routinely asking to see only those with GPAs above a certain level, thus excluding many of the women in the demonstration program.

Little Work Experience

Compared to the other graduates, the WIN women had little work experience, either in electronics or other areas. Most of the other graduates held part-time jobs during training but this was not true of WIN graduates, because of their family responsibilities and the potential reduction or loss of welfare benefits associated with part-time earnings. To compensate, the school counselors tried to adopt techniques used by women's groups to translate the non-paid experiences of the women into evidence of skills and experiences of interest to employers.

Name Changes

Name change as a result of marriages and divorces made it difficult for employers to verify some women's work history. Some had used an alias, which in one case held up a required security clearance for months.

Age And Sex

Companies are sometimes reluctant to hire 35 and 40 year olds for entry-level positions (most regular graduates of the Bell & Howell schools are twenty to twenty-one years old). Sometimes companies are reluctant to hire women for electronics technician positions. Several of the employed graduates were the first women ever hired at this level.

No Telephone

Many of the women did not have a telephone because they could not afford either the monthly cost or the installation deposits often required in their residential areas. This made it difficult for recruiting companies to contact them for follow-up interviews or to make job offers.

No Car Or Driver's License

An entry-level electronics technician job common in the cities where the training took place is "service representative." This job requires a driver's license and sometimes an employee-provided car for customer calls. Employers are reluctant to hire graduates for these jobs unless they have or can quickly acquire a license and a car. Time to take driver's training and money with which to purchase a car were not readily available for the WIN women. One graduate hired for such a position who tried to make do with public transportation jeopardized her job because she was often late for appointments.

Poor Social Skills In Interviews

In spite of extensive counseling on interview techniques, including mock interviews and videotaping of interview sessions for later self-critique, some graduates still did not perform well in job interviews. School officials reported that the problems included poor eye contact and terse answers which may be appropriate for caseworker interviews, but made a poor impression on recruiters.

Failure On Job Tests

In spite of satisfactory performance in classes, some of the women had difficulty passing employer-defined job tests. Reasons mentioned for poor test performance include: client nervousness in the interview situation, emphasis in the tests on information presented in the first terms of the training program, and contrast between the theoretical emphasis in the training and the practical content of the tests. The schools initiated review sessions to help the women overcome this problem.

Naivete About The Job Search Process

Not all the women understood job search procedures, in spite of the school counselor's and placement staff's efforts to familiarize them with the process. A particular problem was recognizing when a firm job offer had been made, and when it had not. Some women misinterpreted the polite remarks of recruiters as a job offer, and stopped interviewing with other companies. By the time they recognized their error, valuable time had been lost and most of the organized recruiting period had passed.

Restrictions On "Acceptable" Jobs

A number of the graduates who were not yet employed when last contacted specified the jobs they would consider. Some were only interested in working with a specific company; others insisted on a particular job shift; and others restricted their job search to a specific location (e.g., within their own neighborhood). Each of these restrictions limited their placement chances. Their low grade point averages and the other problems discussed above narrowed down the

women's options further.

Unwillingness To Relocate

Many women were also reluctant to relocate. Some were not ready to break family and neighborhood ties (children changing schools, etc.); more often, lack of funds to finance a move was a serious obstacle. These women did not have enough money on hand to shoulder moving expenses even if they would be reimbursed by their new employer. Without savings, credit, or someone from whom they could borrow, they were unable to pay for transportation, moving household goods, or arranging new housing (which usually required payment of the first and last month's rent plus a security deposit). Since most had children to transport and house, these expenses could amount to several thousand dollars.

For some of the first graduates WIN provided limited (and inconsistent) amounts of help ranging from $50 in one-dollar bills to $800. In one instance, a woman who had accepted a job in another city had to forego that opportunity because she could not find affordable housing. Another required emergency aid from demonstration grant funds even after receiving one of the larger relocation grants from WIN. The WIN offices' policy on relocation was also inconsistent. Those in higher positions said they supported it if it was for a good job; on the other hand, some counselors were reportedly opposed to relocating and urged graduates to look for good jobs within the home city.

Predicting Successful Placements

Although lack of placement may be related to poor search techniques and less flexibility about employment conditions, the data suggest that those women who found jobs were generally more coping and competent students who had demonstrated their ability to meet the demands of the training program. Furthermore, there is considerable anecdotal evidence that some employers attach great importance to grades and will only consider applicants in the higher range of the grade-point average. This is especially true at a time when demand for new employees is on the low side, as was the case during the job search period. The importance of grades is clearly shown when we compare the cumulative grade point averages of those who succeeded in finding work to those who were not successful. As Table IV-3 illustrates, the rate of placement was appreciably higher among those with grade point averages of 2.9 or better (92%) than among those with lower averages (63%). This point is made even more forcibly by pointing out that of the fourteen graduates who did not find jobs, thirteen had grade point averages below 2.9.

Table IV-4 demonstrates the relationship between initial job status and another factor obviously related to grade point average -- that of elapsed time between enrolling in the training program and graduating from it. The figures clearly indicate that those graduates who completed the program in the shortest time were most successful in obtaining an initial job. Whether their elapsed time was lengthened by having to repeat courses or by dropping out for one or more trimesters, those women who took longest to complete the course were definitely at a

TABLE IV-3

CUMULATIVE GRADE POINT AVERAGE BY INITIAL JOB PLACEMENT
(In Percentages)

Placement	GPA Below 2.9	GPA Above 2.9
Secured job.	63	92
Unsuccessful in finding job.	37	8
	(N=35)	(N=13)

TABLE IV-4

ELAPSED TIME ENROLLED IN TRAINING PROGRAM BY INITIAL JOB PLACEMENT
(In Percentages)

Placement	20 or Fewer Months	24 Months	28-33 Months	36 or More Months
Secured job	92	76	67	-
Unsuccessful in finding	8	24	33	100
	(N=13)	(N=21)	(N=9)	(N=5)

disadvantage in securing jobs.

The data also suggest a relationship between the extent of a graduate's past reliance on public assistance and her initial job status. Table IV-5 compares the initial placement rates of those who had been on public assistance for twelve or fewer continuous months before enrolling at Bell & Howell to those who had been on public assistance for shorter periods. It is clear those who had been on welfare for shorter periods were more successful in finding work than were those who had been dependent for longer periods.

Looking back even further to the graduates' experience with public assistance as children, we find that those women whose families received public assistance at some time while they were growing up were less apt to have been successful in finding a job (58%) than were those whose families had never been on welfare (87%). Table IV-6 provides this comparison.

Almost as interesting as those factors seen as having a bearing on a graduate's success in initial job placement were those factors which appeared to make no difference at all. Among these were the level of entry at Bell & Howell (preparatory or technician I start), educational level before entering Bell & Howell, GATB and math test scores, race, number of children, and presence in the household of a source of income other than the Bell & Howell graduate. The rates of success in finding a job were very similar among the prep starts and the Tech I starts (73% and 69% respectively). So, too, were the rates of placement for those who were high school graduates when they entered Bell & Howell (72%) and those who had not graduated high school (69%). Blacks and Whites had identical rates of success (71% each). The rate of success was not markedly higher among women with one or two children (74%) than among

TABLE IV-5

CONTINUOUS MONTHS ON PUBLIC ASSISTANCE BY INITIAL JOB PLACEMENT
(In Percentages)

Placement	1-12 Months	13-36 Months	36 or More Months
Secured job	88	67	58
Unsuccessful in finding job . . .	12	33	42
	(N=17)	(N=6)	(N=24)

TABLE IV-6

EXPERIENCE WITH PUBLIC ASSISTANCE AS A CHILD
BY INITIAL JOB PLACEMENT
(In Percentages)

Placement	Family Received Public Assistance at Some Point	Family Never Received Public Assistance
Secured job.	58	87
Unsuccessful in finding job. . .	42	13
	(N=12)	(N=30)

those with three or more children (67%). Those women who lived in a household in which someone other than themselves brought in some income were no less apt to have found a job (33%) than were those who were the only sources of income (other than public assistance) for their households (36%).

Characteristics Of Initial Jobs

Table IV-7 summarizes certain of the characteristics of the initial jobs obtained by the electronics technician training graduates. The jobs secured by all but one of the women were full-time (the one exception was a twenty-five hour a week job) while all but two women were employed in an electronics related field. Starting annual salaries ranged from a low of $8,320 to a high of $16,890, with an average of $12,883. While the average for the WIN graduates is somewhat lower than the Bell & Howell average ($13,800 for technician program graduates), it is considerably higher than the national average of $7,634 for women placed through usual WIN services during this period (ETA Interchange, August, 1981.)

Job Titles

A large number of job titles are used to describe electronics technician positions. Moreover, different employers use different titles for the same essentially identical positions. There are some differences in the distribution of titles among the graduates. A smaller proportion of WIN women than other graduates had "electronics technician" as a job title, while a larger proportion were "communications technicians." WIN graduates also did not become "equipment service representatives" as frequently as other graduates,

TABLE IV-7

CHARACTERISTICS OF INITIAL JOBS BY SITE
(In Percentages)

Characteristics	Chicago	Columbus
Industry		
Electronics - related.	95	92
Other.	5	8
	(N=19)	(N=12)
Time Worked Per Week		
Full-time.	95	100
Part-time.	5	-
	(N=19)	(N=12)
Salary		
Lowest	$ 9,256	$ 8,320
Highest.	$16,890	$15,600
Average.	$13,106	$12,532
	(N=19)	(N=12)

perhaps because these jobs require that the incumbent have a driver's license and sometimes an automobile. It should be noted that some of the WIN women held positions usually filled by graduates from more advanced programs and that at least two of the women were the first technician level graduates ever to be hired by their employer.

Problems In Transition From School To Work

The experiences of the employed graduates in making the transition from school to paid employment point our some unanticipated issues which should be dealt with to improve the success of this and other training programs. Most of the problems center around the timing of the loss of support from public agencies. Many graduates felt that services were prematurely withdrawn, before graduates could acquire the resources to compensate for the loss. In a few cases, graduates were forced to give up jobs because of transition problems.

One major problem was health care: women often had to wait to complete a probationary period before being eligible for company health plans, and then discovered that there were deductibles and that coverage was less extensive than that provided by public aid. Those who need, or who have children who require regular care from specialists find it very expensive to continue treatment. Sometimes company plans do not cover them at all under "existing condition" clauses. Arrangements for childcare while working have also been difficult, especially for those who have relocated. Besides the previously discussed relocation costs, other financial problems included such things as acquiring a wardrobe for working, purchasing food and other necessities while waiting for the first paycheck.

It is clear that some graduates were more resourceful than others in coping with transition problems; furthermore, individual circumstances including health, access to sources of financial help and employer policies all affect one's ability to handle the transition stage. However, welfare and training agencies must be aware that these problems are real, and likely to present impediments to post training employment even for qualified graduates ready to be placed in well-paying jobs. Unlike middle class job seekers or job changers, welfare clients lack minimal financial and credit resources to negotiate the transition steps on their own; furthermore, their status as single heads of households makes extra financial demands with respect to housing and childcare. Unless these issues are addressed, it is likely that despite high investment made in their training and their good job qualifications, some portion of these "elite" welfare clients will remain welfare-dependent.

The data presented in this section suggest that the graduates' ability to obtain a job following graduation cannot be attributed to any one factor although completing the program more rapidly (without interruptions or the need to repeat courses), good grades, and a family background without public assistance experience tended to distinguish successful from unsuccessful graduates. However, there is no doubt that non-measured psychological characteristics and idiosyncratic events in the lives of the graduates played an important part in the ultimate outcome. Given the small number of cases on which this assessment of outcomes is based, a few case histories -- describing five successful and four unsuccessful graduates -- may be illuminating.

Case Studies Of Selected Graduates

To give the reader a more life-like picture of the experiences of the women completing this program, we present below a few "thumb nail sketches." The first group of descriptions are of the women who might be considered "successes" - those who found employment after graduating from the program.

Ms. "A". A thirty year old woman with three children aged nine, ten, and thirteen when she entered the electronics technician training program in June, 1978, she had been on public assistance only three months before enrolling, but had received public assistance during earlier periods as well. Prior to enrolling, the job she had held for the longest time was a thirty month stint as a part-time waitress, earning $1.25 an hour.

Despite the lack of a high school diploma (she had completed tenth grade in 1963) and in spite of severe financial problems which at times led her to consider dropping the program, Ms. A was able to complete the course in twenty months, graduating with a cumulative grade point average of 3.89, the highest average earned by any woman in the study population. She was described by the school counselor as "very articulate" and as the leader of most class discussions.

Her academic excellence stood her in good stead during her job-searching efforts. At the time of graduation she had three offers to consider. She described two of them (both in the telecommunications industry) as attractive in terms of salary and benefits, but unappealing in terms of location. Despite a previously expressed preference for working for one of these companies, she turned down its offer because it

would have required commuting to the downtown business district. She initially accepted the other telecommunications company offer, but later declined it because of lack of transportation. She acknowledged that the emphasis which she placed on convenience made her search more difficult, but she was fortunately able to be choosey. She ultimately accepted a position at $6.60 per hour with an electronic musical instrument company, testing and repairing instruments as they came off the assembly line. Her stated reasons for accepting this offer were that it "...was close to home, the salary and benefits were decent, and I could wear blue jeans."

Describing her participation in the program, she said: "For me personally, it was a great opportunity. It put me on the road. Before I had just a tunnel in front of me. Now there's a light at the end of the tunnel."

Ms. "B". This twenty-seven year old woman had a tenth grade education, little employment experience, and a lengthy public assistance history when she entered the program at the "preparatory" level in October 1978. The high point of her employment record had been a thirteen month period as a nurse's aid in a hospital in 1968 and 1969 during which she earned $2.10 an hour. She had been on public assistance for at least 84 consecutive months before enrolling in the training.

Ms. B began her training in a most inauspicious fashion, breaking her arm during the first trimester and missing many hours of class. Perhaps because of these absences, she failed a math course, was placed on academic probation, and had to repeat the term. After this rocky beginning, her performance stabilized and she graduated in February 1981, twenty-eight months after she started with a cumulative grade

point average of 2.19. During her period of enrollment, she obtained her GED with the assistance of the school counselor. Despite her ultimate success in graduating from the program, Ms. B stated that transportation, finances, and clothes had all been serious problems that made participation in the program difficult. Moreover, she felt her participation had had a negative effect on her two children because they needed more attention than she could give them.

By the time of her graduation, Ms. B had interviewed with ten different firms and received an offer from one. She accepted that offer and in March 1981, she started working as a repair shop technician for an organization which manufactures industrial robots. Her starting salary was $6.51 per hour.

Ms. "C". This woman was better educated (she attended one year of college) and had had more employment experience than most of the program participants when she enrolled in June, 1978. A recent divorcee with one son, she had been on public assistance only one month before being referred to the WIN program in May 1978. She had held full-time employment from 1972 to 1977 as the manager of a shop, earning $4.50 per hour.

At the time she was referred to WIN, Ms. C felt she needed to go back to work for financial reasons but felt training would enable her to earn more money. She had originally hoped to be trained as a commercial artist but was persuaded that the electronics technician training program offered greater promise and that her test scores demonstrated an aptitude for it. While in the training, she experienced financial and personal problems (many stemming from her son's emotional problems) which caused her frequent absences and may have affected her grades during several terms. She ultimately graduated right on schedule,

however, in February 1980, with a grade point average of 2.95.

By graduation, Ms. C had interviewed with nine firms, and had received two offers. The offer she accepted was from a telecommunications equipment manufacturing firm as an electronics tester technician. The salary she received, $8.12 per hour, was the highest starting salary earned by any study participant. She was forthright in admitting that it was that salary that attracted her. She stopped receiving public assistance in March 1980, the same month she started on the ~~job.~~

Ms. "D" entered the preparatory course in October 1978. At that time she was thirty years old with four school aged children, two of whom were handicapped. She reported having been on and off welfare for twelve years prior to the program start. She had received public assistance continuously for the 96 months preceding October 1978. The longest job she had ever held was from August 1968 to January 1970, earning $3.00 an hour as a key-tape operator. She was forced to quit that job for health reasons.

Ms. D felt that her tenth grade education ill-prepared her for the program and much of her performance in the program reflected this fact. She had to repeat one term and spent several terms on academic probation, but was ultimately able to graduate in February 1981, after twenty eight months in the program. Her cumulative grade point average was 2.16.

Despite having been described by her counselor as participating "in all activities related to job placement," Ms. D had had only three job interviews and had received no job offers by the time of her graduation. She attributed her lack of offers to her low grades. She spent the three months following graduation searching for employment. Finally a

friend told her of the possibility of a job at a telecommunications company, and in June 1981 she started work there as a communications technician. Her initial rate of pay was $6.36 per hour. She stopped receiving public assistance in August 1981. According to Ms. D, the demonstration program "really helped turn things around for me."

Ms. "E" was the first of the demonstration project participants to graduate from the electronics technician training program in her site. Originally a member of the comparison group, her interest in the training program was such that she enrolled at OIT on her own, using BEOG funds. When one of the originally selected program participants chose not to enroll in the training, Ms. E was selected to fill the space.

When Ms. E entered the program in October 1978, her two children were seven and ten. She was a high school graduate and had held eight jobs prior to her enrollment. Her highest paying job had been as a police dispatcher, earning $3.10 an hour in 1973. She had been on public assistance for a very short time before being selected as a study participant.

Ms. E's tenure in the program was marked by controversy concerning her eligibility for public assistance, stemming from a custody battle incident to divorce proceedings. Despite these upheavals, Ms. E compiled an outstanding academic record, graduating in June 1980 with a cumulative grade point average of 3.85. She served as a faculty assistant at the school for four of her five trimesters, averaging twenty-five hours a week in that capacity.

By graduation, Ms. E had interviewed with approximately fifteen firms and had received four offers. Although she had originally wanted to stay in the same city, three of these four offers involved relocation

and her ultimate choice required a move to California. She began her employment as a power supply technician for a "High Tech" firm in 1980 at $7.50 an hour. She explained her job choice in the following words: "I thought it was a long-standing type of job with a good foundation."

The second group of sketches are of women who were unable to find employment after graduation.

Ms. "V" was a voluntary WIN participant when she enrolled in the training in October 1978. She was at that time a twenty-two year old high school dropout and the mother of a small child. She had never held a paid job and had been on public assistance for approximately four years before being referred to WIN in September 1978.

Ms. V began her training in a very successful fashion, making the Dean's list for her grades in the preparatory studies program. Family illness caused her to withdraw from the school before her second trimester, however, but she re-enrolled four months later and again made the Dean's list for her Technician I grades. From this point on, however, everything "went downhill." Her subsequent terms were marked by academic probation, dropping out a second time, having to repeat courses, and so forth. Family problems were evidently the basis of much of her difficulty and they beset her throughout her enrollment. When she finally graduated in February 1982, forty months after her first enrollment, her counselor reported: "Her final trimester was very sad. Her youngest sister and her eighteen month old daughter died when their house caught fire."

Ms. V's final study interview took place eight months after her graduation, eight months during which she had looked for work unsuccessfully. During this time she had failed to have even one job

interview. When asked why she thought this was so, she responded"...large companies are not hiring...certainly not women." School counselors feel that some of her lack of success can again be attributed to family problems. They note that despite an active job search "...her efforts are hindered because she has taken responsibility for her deceased sister's eight year old child."

Ms. V's family continues on public assistance, receiving AFDC, food stamps, and Medicaid. Ms. V's mother lives with her and supplements the household's income with her disability insurance. Total household income in 1981 was between $7,000 and $10,999.

Ms. "W" was twenty-one years old when she enrolled in the preparatory studies program in October 1978. She was a high school graduate with a one year old son. Her previous work experience consisted of tutoring children at a local neighborhood center, a position which she started while in high school and held until November 1977. At the time she left that position, she was earning $2.65 an hour but worked only eight hours a week. She had been on public assistance approximately ten months before her referral to the WIN program in September 1978.

Ms. W found her studies very difficult. She was placed on academic probation after her second trimester and dismissed for academic reasons following her third. After a "layoff" of approximately five months, she was reinstated and remained enrolled for six more terms, finally graduating in February 1982, forty months after she first enrolled. Her grade point average was 2.62.

At the time of her last interview, Ms. W reported that she had spent the nine months since her graduation in a search for work, a search so unsuccessful that she had not had even one interview. She blamed her

failure to find work on the economic situation, adding "My responses were always 'we are not employing at the moment.'"

Despite her difficulties in this training, Ms. W has expressed an interest in furthering her education, and, in fact, was enrolled for four months after graduation in another program leading to a Bachelor's degree in Computer Science, supported by a basic grant and a state grant. Although she dropped out of that program, she continued to be interested in additional education, telling the interviewer that she planned to attend the local state university if she were not able to find a job. School counselors suggest that she might prefer additional schooling to work, if it were financially possible.

Ms. W and her son continue to receive public assistance, getting AFDC, Food stamps, Medicaid, and a housing subsidy.

Ms. "X". At forty-one, she was one of the oldest participants in the demonstration project when she enrolled in June 1978. The mother of five teen-age children, she had completed high school in 1957 and had held four paying jobs before entering the training program. Her highest salary was the $2.00 an hour she had earned as a checker in a laundry from September 1974 until November 1975. She had entered the WIN program in December 1976 and had been on public assistance for four years prior to this time.

Ms. X started at the preparatory level, completing that term very successfully with a grade point average of 3.60. Her next term was less successful, however. Complications surrounding the assault of one of her daughters caused her to miss a number of classes and she ultimately dropped one course and failed another. She was placed on academic probation and had to repeat the term. The remainder of her terms proved less eventful and she graduated in October 1980, twenty-eight months

after starting the program, with a cumulative grade point average of 2.41.

Ms. X's second study interview took place in November 1980, one month after her graduation. At that time she had interviewed with twenty-four firms but had received no job offers. Her final study interview took place in November 1982. She was still unemployed at that time despite having looked for work during each of the intervening twenty-four months

At the time of her final study interview, Ms. X was living with two of her children, now aged nineteen and twenty-one. The family had been off public assistance since July 1981 and was supported by the income from her daughter's full-time job. The household income for 1981 was between $7,000 and $10,999.

Ms. "Y" had held ten paying jobs before entering the training program in October 1978. The longest of these jobs was nine months spent as a CETA-sponsored teacher's aide at a community center in the year preceding her enrollment. She was paid $3.50 an hour for this work but was fired from it, according to her, because she did not like the working conditions. Ms. Y was twenty-nine years old, had a six year old son, and had completed two years of junior college when she began the program. She had been on public assistance for six years.

Ms. Y began her studies at the preparatory level. Evaluating her progress during her first term, the school counselor reported: "...Flamboyant (sic) approach made it difficult for her to relate well with other students. Although she progressed will in preparatory studies, I anticipate further problems." This assessment proved overly pessimistic for, although she was placed on academic probation during one trimester, she did not have to repeat any terms and graduated on

schedule in October 1980, twenty-four months after she had enrolled. Her cumulative grade point average was 2.61.

During a January 1981 interview, Ms. Y expressed extremely negative feelings about the program, which is in strong contrast to most of the graduates who were very positive about their participation. When asked what she liked most about the program, Ms. Y responded "Nothing. I didn't like going to [her school] at all. You had to deal with a lot of prejudice and it's too competitive and some of the teachers felt only men should be in the program." She also complained that she had been unfairly treated because of her age and sex and she was extremely critical of the school's placement services. She had apparently believed that a job would be handed to her upon graduation and was disgruntled when she discovered that she was going to have to look for work for herself.

Much of Ms. Y's bitterness in this interview could no doubt be attributed to the fact that, three months after graduation, she was still unemployed. Despite having had approximately thirty interviews by that point (of which about twenty had been arranged by the school), she had received no offers. She attributed this lack of offers to her lack of experience and to the fact that she was unwilling to work in the suburbs or relocate out of town. She did indicate, though, that there was one job which she expected would be offered to her. She planned to continue looking for work, however, because that job would not be available for a year.

When Ms. Y was interviewed the final time in October 1982, she was still waiting to be called by the firm from which she expected an offer. During the intervening twenty-one months, she had not heard from it nor had she received an offer from any other organization despite having

continued to look. Again, she attributed her lack of success to her lack of experience in the electronics field. Reflecting over her twenty-four month job search, she said that she felt she might have gotten a job right after graduation if she had had a car to use to get to the suburbs.

Ms. Y was still enrolled in WIN and she and her son were still receiving AFDC, Food stamps, Medicaid and a housing subsidy at the time of her last interview.

V. EMPLOYMENT STATUS OF PROGRAM GRADUATES, DROPOUTS, AND COMPARISON GROUP MEMBERS

The Phase III interviews were designed to collect extensive information about the current employment status of all members of the study population, including salary, hours worked per week, type of industry, and job titles. Also available are similar data about other jobs held since leaving the training program or since non-selection for the training. In this chapter, we will use these data to assess the extent to which the employment situation of those women who completed the training compared with that of their peers who qualified for the training, but either dropped out or were assigned to the comparison group.

There are technical difficulties involved in performing these comparisons primarily due to differences in labor market availability for individual members of the three groups, since dropping out and graduation occurred at various times. To deal with these differences, and to simplify the references to dates in this chapter, a "benchmark" is used. For the dropouts, the benchmark is the date each woman dropped out of the training program for the final time. For the members of the comparison group, the benchmark is the date they were informed they had not been selected for the training, which occurred in either June 1978 or October 1978. For graduates, the benchmark is the date that they completed the Bell & Howell training program.

Current Employment Status

As of December 31, 1982, fifty-two female WIN clients had graduated from the program (39 were members of the original study population, 13 were members of subsequent groups of WIN-sponsored women admitted to the program). Phase III interviews were obtained for 40 of these graduates. Eleven of the twelve "missing" graduates were last interviewed during Phase II, shortly after their graduations in 1980 and 1981 (one woman left Chicago immediately after graduation and has been lost to both the school and the study ever since). As of the last placement reports we have from counselors at the two schools, (March, 1982 for Chicago, May, 1982 for Columbus), six of these women had found work and were still employed, two had found work but had subsequently been let go, two were still looking, and one had chosen not to work because of a new baby. The average starting salary of the eight women in this group who found work was $13,629. Each of their jobs was in the electronics field. Among the forty graduates from whom Phase III interview data were obtained, twenty-five (73%) had found employment, all but one in electronics-related jobs. Taken together, thirty-three (66%) of the fifty-one graduates for whom we have some information found jobs upon completion of training, while 18 have never worked. As of December, 1982, the situation was less favorable: seventeen (52%) of those ever placed were still working for their first employer, six (18%) had moved to a subsequent employer, and ten (30%) had been laid off or quit their jobs. Thus, in December 1982, 28 of the total group of graduates were known to be working, while 23 were not.

All of the clients who have been laid off are actively seeking employment. Since all eighteen of the "never placed" graduates also said that they were seeking a job, counselors were asked to verify the job search activity by determining what proportion of these graduates had actually interviewed for jobs. While all of the "never placed" Chicago graduates had had at lease one job interview, this was true for only half of their Columbus counterparts.

It should be noted that instances of individuals graduating from the technician program but not looking for work occur among non-WIN-sponsored students as well. Administrators of the Bell & Howell Education Group estimate that fifteen percent of the graduates never come to the placement office for help. While some of these do not require help because they have already found employment on their own, the majority are not interested in working at the time of graduation. The placement office records suggest that these include individuals who married and/or became pregnant and withdrew from the labor force, who planned to move out of town and would look for a job later, who would not cooperate with the placement office, who never prepared a resume, and who failed to come to scheduled interviews. When Bell & Howell reports on placement experiences, it qualifies its statistics by stating that they cover only those students who came to the placement office for help. In contrast, the placement reports on the WIN graduates include all of the women. This difference in reporting procedures should be considered when contrasting the sixty-six percent placement record of the WIN graduates with the ninety percent placement rate reported by Bell & Howell for non-WIN students.

Hourly Wages And Estimated Annual Earnings

When the Phase III interviews were administered in December of 1982, forty-two percent of the 40 graduates available for interview, thirty-two percent of program dropouts and forty percent of the comparison group were employed at a paid job (See Table V-1). [18] Of those currently employed, thirty percent of the dropouts and sixteen percent of the comparison group reported that they usually worked fewer than thirty-five hours per week. This is in sharp contrast to currently employed graduates, none of whom reported working less than thirty-five hours per week.

The average hourly wage earned was $8.53 for graduates, $4.86 for dropouts and $5.21 for the comparison group. Assuming fifty paid weeks per year, the estimated average annual salary earned was $18,244 for graduates, $9,830 for dropouts, and $10,974 for the comparison group. [19]

These figures illustrate the very striking advantage in the labor market that is enjoyed by currently employed program graduates whose estimated average annual earnings are almost twice those of currently employed dropouts and comparison group members. That is not to say, however, that there are no specific individuals in the study population who have succeeded in the labor market without the electronic technician

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18. Unless otherwise noted, tables in this chapter are based on information obtained from responses to the Phase III interview.

19. The annual salary figures are somewhat inflated as they include overtime hours for those reporting they usually worked more than forty hours per week. The women on the high end of the range for hourly earnings are employed on assembly lines. Those on the high end of the range for annual earnings report working sixty or more hours per week. Those with very low annual earnings worked very few hours at very low pay (less than minimum wage) at such jobs as babysitting.

TABLE V-1

CURRENT EMPLOYMENT STATUS OF GRADUATES, DROPOUTS AND COMPARISON GROUP MEMBERS: HOURS WORKED PER WEEK, HOURLY WAGE, AND ESTIMATED ANNUAL EARNINGS[a]

Employment Status	Program Graduates	Program Dropouts	Comparison Group
Never employed since benchmark date.	38	27	33
Not currently employed, but held job since benchmark date.	20	41	27
Currently (12/82) employed.	42	32	40
	(N=40)	(N=73)	(N=93)
Hours Usually Worked Per Week:			
Average	40.6	35.0	37.5
(Range)	(38-50)	(3-68)	(8-50)
Hourly Wage:			
Average	$8.53	$4.86	$5.21
(Range)	($4-$11)	($1-$8)	($2-$13)
Estimated Annual Earnings:[b]			
Average	$18,244	$9,930	$10,947
(Range)	($11,875-$23,340)	($859-$17,170)	($1552-$27,000)

[a]Table includes only respondents to Phase III interview.

[b]Annual salary was estimated by multiplying hourly wage by number of hours worked per week to get weekly salary, which was then multiplied by 50.

training. Certainly those dropout and comparison group women at the upper ends of the estimated annual earnings range have done very well.

WIN And AFDC Status

As shown in Table V-2, at the time of the Phase III interview all employed program graduates reported themselves as being independent of the welfare system. Seventeen percent of the employed dropouts and eight percent of the employed comparison group members continued to receive AFDC benefits (Table V-2). Although the employed graduates clearly did best in this regard, the data suggest that the crucial variable determining welfare dependence among the study population is employment (Table V-3).

The most common reasons given for leaving the WIN program were becoming employed or getting enough income from other sources to leave public aid, and leaving because they were not selected for the electronics technician training (comparison group) or because they thought they had to leave after dropping out of the training (dropouts). Similar reasons were given for leaving AFDC. While everyone of the currently employed program graduates is earning a wage that enables her to be self-supporting and independent of the welfare system, this is true for a somewhat smaller proportion of the currently employed women in the other two groups. A further indication of the financial independence of currently employed program graduates is the availability of a full benefit package: all have medical insurance and all but one have both dental insurance and sick leave. Slightly less than half of the currently employed dropouts and comparison group members reported having comparable full benefit packages. In sum, employed graduates appear to have adequate incomes and fringe benefits to remain

TABLE V-2

WIN AND AFDC STATUS OF THE CURRENTLY EMPLOYED GRADUATES, DROPOUTS, AND COMPARISON GROUP MEMBERS
(In Percentages)

WIN and AFDC Status	Program Graduates	Program Dropouts	Comparison Group
Enrolled in WIN and AFDC.	-	-	8
Enrolled in AFDC only	-	17	-
Not enrolled in either WIN or AFDC.	100	83	92
	(N=17)	(N=23)	(N=37)

TABLE V-3

WIN AND AFDC STATUS OF OTHER (NOT CURRENTLY EMPLOYED) GRADUATES, DROPOUTS AND COMPARISON GROUP MEMBERS
(In Percentages)

WIN and AFDC Status	Program Graduates	Program Dropouts	Comparison Group
Enrolled in WIN and AFDC.	23	29	29
Enrolled in AFDC only	41	47	40
Not enrolled in either WIN or AFDC.	36	24	31
	(N=22)	(N=49)	(N=52)

independent of welfare even in the event of illness, while employed members of the other two groups don't have the earnings "cushion" and insurance protection to assure continued independence.

Industry And Job Titles

Table V-4 shows that, compared to 88% of the graduates, none of the dropouts or comparison group members reported that they were currently employed in the electronics industry. Furthermore, all but one of the currently employed graduates reported having an electronics job. Included among the job titles were engineer, communications technician (6 women), electronic technician (2 women), repair shop technician, lab technician, field service parts technician (2 women), systems/office technician, engineering and science assistant, and junior technician. The one "high clerical" job involved assembling technical manuals for shipment with a company's product.

The most common industry areas for currently employed dropouts and comparison group members were manufacturing; services, especially the health services, and public administration, especially jobs with government agencies. The job titles held were largely in the low clerical and service areas.

Twenty-three percent of the currently employed dropouts reported that completing a portion of the electronics technician training program directly affected their ability to obtain their current job. Eleven of the currently employed comparison group members reported that attending the orientation session (part of the study selection process) influenced their decision to look for the job they held at the time of the interview. Since none were employed in the electronics industry, this suggests that qualifying for this very selective training program

TABLE V-4

CURRENT EMPLOYMENT STATUS OF THE GRADUATES, DROPOUTS AND COMPARISON GROUP: INDUSTRY OF EMPLOYER, JOB TITLES
(In Percentages)

Industry and Job Title	Employed Graduates	Employed Program Dropouts	Employed Comparison Group
Industry of Employer			
Electronics	88	-	-
Manufacturing	6	26	29
Transportation	-	4	3
Retail Trade	-	9	11
Finance, Insurance, Real Estate	-	9	8
Services	6	26	26
Public Administration	-	22	23
Other	-	4	-
	(N=17)	(N=23)	(N=37)
Job Titles			
Professional	-	-	-
Sub-professional and Technical	-	4	3
Managerial, Administrative and Proprietary	-	9	5
High Clerical	6	9	8
Low Clerical	-	35	51
Foreman, Craftsman, Kindred	-	4	3
Operative and Kindred	-	13	8
Service Workers	-	22	19
Electronics	94	4	3
	(N=17)	(N=23)	(N=37)

provided some motivation for these clients to seek employment.

Sex-Typing Of Current Jobs

Nearly all of the members of the dropout and comparison groups were currently employed in traditionally female positions. As shown in Table V-5, sixty-one percent of dropouts and seventy-three percent of the comparison group who were employed reported that all or nearly all of the employees who held the same position she did were women. The comparable figure for currently employed graduates is only nineteen percent. This is one very important reason for the earnings advantage enjoyed by program graduates, since traditionally male jobs tend to have substantially higher wages than traditionally female jobs. In addition, jobs in the "high tech" electronics field tend to have generally higher wages than those in government and service agencies.

Employment Status Of "Ever Employed" Study Participants

For program graduates, an average of almost two years passed between the benchmark date and the Phase III interview; for dropouts the average was almost three years; and for the comparison group the average was almost four years. As was shown in Table V-1, during this time twenty percent of the graduates, forty-one percent of the dropouts and twenty-seven percent of the comparison group held paid jobs which they have since left. This brings the total percentage of these three groups ever employed since the benchmark date to sixty-two percent for the graduates, seventy-three percent for the dropouts and sixty-seven percent for the comparison group.

TABLE V-5

CURRENT EMPLOYMENT STATUS OF GRADUATES, DROPOUTS, AND COMPARISON GROUP:
PROPORTION OF EMPLOYEES HOLDING THE SAME POSITION
AT THE RESPONDENT'S PLACE OF EMPLOYMENT
WHO ARE WOMEN
(In Percentages)

Proportion Who Are Women	Program Graduates	Program Dropouts	Comparison Group
All	6	44	50
Most.	13	17	23
Some.	56	26	15
None.	25	13	12
	(N=16)	(N=23)	(N=34)

Since the time period during which this study was conducted was one of economic recession and high unemployment rates, it seems reasonable to provide some overall assessment of the relative advantage of program completion over dropping out and never having been enrolled (comparison group). This is particularly cogent because most of the formerly employed women are seeking jobs and will presumably improve their chances of finding work as the recession subsides.

Table V-6 shows a distinct advantage for ever-employed program graduates in hours worked per week, hourly wage, and estimated annual earnings. The estimated annual earnings advantage of ever-employed graduates ($15,654) over ever-employed dropouts ($7,468) is of the same magnitudes as that for currently employed members of both groups reported in Table V-1. For ever-employed comparison group members ($9,659), the magnitude of this annual earnings difference is slightly less than that shown in Table V-1 but it is still quite substantial.

Many of the jobs held since the benchmark date were of short duration: the average (not including the current job) was seven months for dropouts, eight months for graduates, and twelve months for the comparison group. Table V-7 shows that the most common reasons given for leaving these jobs were similar for dropouts and comparison group members, with lay-offs being dominant. Seventeen percent of the formerly employed dropouts reported having a dispute with their boss. Among the comparison group members, sixteen percent reported having a temporary job come to an end and twelve percent reported having child care problems. All but one of the formerly employed graduates had been laid off.

TABLE V-6

EMPLOYMENT STATUS OF GRADUATES, DROPOUTS, AND COMPARISON GROUP MEMBERS EVER EMPLOYED SINCE BENCHMARK DATE: HOURS WORKED PER WEEK, HOURLY WAGE, AND ESTIMATED ANNUAL EARNINGS FOR HIGHEST PAYING JOB[a]

Employment Status	Program Graduates	Program Dropouts	Comparison Group
Hours Usually Worked Per Week:			
Average	39.9	34.9	37.0
(Range)	(25-50)	(3-68)	(6-55)
Hourly Wage:			
Average	$7.40	$3.75	$4.55
(Range)	($3-11)	($1-$8)	($2-$13)
Estimated Annual Earnings:[b]			
Average	$15,654	$7,468	$9,659
(Range)	($6,250-$23,340)	($859-$17,170)	($1,050-$27,000)
	(N=30)	(N=61)	(N=65)

[a]Table includes all respondents who provided job information for either the Phase II or Phase III interviews.

[b]Annual salary was estimated by multiplying hourly wage by number of hours worked per week to get weekly salary, which was then multiplied by 50. Wages are not adjusted for inflation.

TABLE V-7

REASONS LISTED BY FORMERLY EMPLOYED GRADUATES, DROPOUTS AND COMPARISON GROUP FOR LEAVING JOBS DURING PERIOD BETWEEN BENCHMARK DATE AND THE PHASE III INTERVIEW
(In Percentages)

Reasons	Program Graduates	Program Dropouts	Comparison Group
Laid-off.	88	29	24
Quit - pay too low.	-	5	8
Quit - dispute with boss.	-	17	-
Quit - transportation problems. . .	-	5	8
Fired	-	5	8
Job was temporary	-	5	16
Quit - child care problem	-	-	12
Quit - personal or emotional problems.	12	5	4
Quit for other reasons.	-	29	20
	(N=8)	(N=18)	(N=25)

Categorizing The Dropouts

One should note that dropouts are not one homogeneous group of WIN clients. They vary on a number of background, school experience and other characteristics. Two ways of categorizing the dropouts were examined in the preparation of this report. One was to divide dropouts into those who were terminated by the schools for unsatisfactory attendance or academic performance (55% of dropouts) and those who voluntarily left the program (45% of dropouts). While thirty-six percent of those who voluntarily left the program were employed at the time of the Phase II interview, only nineteen percent of those who left it involuntarily were employed. The average annual salary for "voluntary leavers" was $10,941 compared to $7,601 for "involuntary leavers." The voluntary leavers also spent less time on public assistance after leaving the program. These findings support the argument that voluntary dropouts tend to prefer immediate placement over training and will leave the training program to take advantage of an immediate employment opportunity rather than wait for training to be completed.

The other dimension on which the dropouts were subdivided is the number of terms completed before dropping out. There was little difference in the percentage employed at the time of the Phase II interview between dropouts who failed to complete one term and those who completed one or more terms (twenty-four and twenty-eight percent, respectively). There was, however, a major difference between the two groups in average annual salary. Those who failed to complete a term averaged $7,624 while those who completed one averaged $11,295. The

average salary earned by dropouts failing to complete a term is nearly identical to the average annual salary of women placed through WIN ($7,634). The higher salaries earned by completers of one term or more indicate either that these women learned skills during their time in the program which allowed them to increase the wages they could command, or that these women brought more ability and motivation to the program initially.

Summary

Those WIN-sponsored graduates of the Bell & Howell electronics technician training program who were employed at the time of the Phase III interview had a distinct earnings advantage over both employed dropouts and employed comparison group members . Employed graduates have all attained independence from the welfare system.

Program dropouts and comparison group members, except for those dropouts who stayed in the program for some length of time, seemed to have derived virtually no advantage from their participation in the study over and above what they would have attained through receipt of usual WIN services.

Employed dropouts who had left the program voluntarily (rather than being terminated because of unsatisfactory performances or attendance) and/or had completed at lease one full term of the electronics training program enjoyed considerably higher wages than those who had stayed in the program for a briefer period. While currently employed comparison group members in Columbus were significantly more likely than their Chicago counterparts to be working full-time, the Columbus clients were also more likely to be working in traditionally female, lower paying clerical and service jobs. In large part, this is a reflection of the

job market in Columbus which has a large clerical and service employment base because it is both the state capital and the site of one of the largest universities in the United States. Employed dropouts and comparison group members, despite their reports of current welfare independence, did not have the earnings "cushion" enjoyed by employed program graduates that would assure their continued, long-term independence from the welfare system.

VI. COST/BENEFIT ANALYSES

The final component of our evaluation of this WIN demonstration program is a series of cost/benefit analyses, which were carried out despite the limitations to which they are subject, discussed below. When conducting cost/benefit analyses, it is important to specify the perspective from which costs and benefits are being calculated. Below we present three separate cost/benefit analyses: one each for the program participant, the taxpayer and society. The cost/benefit analysis for the participant is to determine whether the post-training increases in income match or exceed the personal costs, such as foregone income, during the training period. The cost/benefit analysis from the point of view of the taxpayer seeks to establish whether increases in tax revenues and decreases in welfare payments exceed the expense to the taxpayer of providing this training. Finally, the cost/benefit analysis from a societal perspective is the net increase in total employment-related income which occurred as a result of the training program. Table VI-1 displays the elements included as costs and benefits from each perspective.

Limitations To The Analysis

Among the optimal conditions for conducting a cost/benefit analysis are: 1) that the program is beyond the development stage and there is certainty about the effects; 2) that program impact and magnitude of impact are known or can be validly estimated, and 3) that benefits can

TABLE VI-1

ELEMENTS OF COSTS AND BENEFITS*

	Perspective		
	Individual	Taxpayer	Social
Benefits	Increase in Earnings	Reduction in Transfer Payments Increase in Tax Revenues	Increase in Earnings
Costs	Opportunity Cost of Training Participants	Costs of Providing Training	Opportunity Costs of Participants Costs of Providing Training

*Adapted from Peter H. Rossi, et. al., Evaluation: A Systematic Approach. Beverley Hills, Sage Publications, 1979, p. 259, Table 8-1.

be reduced to monetary terms.[20]

It can be argued that this project meets none of these conditions. The project was a demonstration program, and as discussed in earlier chapters, there were considerable start-up problems. As the project went on, changes occurred in the selection criteria for later cohorts of WIN participants, and considerable improvements were made in the delivery of support services and counseling. The last group of WIN women admitted experienced a very different program from that offered to the women in our study population. Thus, the program studied was not beyond the development stage. Nor can it be claimed that the impact and magnitude of the impact is known. Since we have no data on whether the lifetime labor force experiences of these program graduates will be like those of prior Bell & Howell graduates, we are unable to develop projections of future earnings. Finally, it is clear that in this, as in all manpower and education programs, not all benefits can be measured in monetary terms. The reports of program counselors and local WIN office personnel, and our own interviews indicate that some of the most important effects of the program may include increased efforts made by the children of these women in their schoolwork and the raising of educational aspirations. There also were reports in the study population that there had been increases in self-respect among the women, and that they had more confidence and experience when going into interviews as a result of the screening process alone. It can also be argued that when successful graduates can afford to move their families to better neighborhoods and a new social environment, the chances for

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20. Peter H. Rossi, et. al. Evaluation: A Systematic Approach, Beverley Hills, Sage Publications, 1979. p. 272,273.

deviant behavior on the part of teen-age children diminish.

When reviewing the literature on manpower programs to which cost/benefit analyses have been applied, we found that the typical program is one in which participants constitute clearly defined cohorts with few dropouts, in which it is possible to define a uniform start and finish date, and a uniform follow-up observation period, and in which heavy reliance is placed on administratively collected data for measures of client characteristics, program costs and benefits, and transfer payments.[21]

The reader should be aware of the following caveats to the cost/benefit analysis presented below.

Since this type of analysis was not initially built into the project design, not all required data were collected at the outset. No ex post facto arrangements for collecting these data could be made. As a result the data on transfer payments are especially weak, since they are based on estimates of "average" benefits and client self-reports.

Nearly all job history and earnings data are based on client responses to a series of interviews during the life of the project. This brings to the fore the problems of response rate, item non-response and the small study population. While the overall response rates during our data collection efforts have been high (See Appendix B), the small population size, especially among program graduates, makes the loss of a single subject important, as one response can cause major percentage

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21. For example, see Perry, Charles R., et. al. The Impact of Government Manpower Programs: In General, and on Minorities and Women. Philadelphia, The Wharton School, University of Pennsylvania, 1975; and Gerald G. Somers and W. donald Wood, eds. North American Conference on Cost-Benefit Analysis of Manpower Policies. Kingston, Ontario, Queen's University, 1969.

shifts in the distributions or the calculated averages. The same is true for those rare instances when a respondent refused to give key information, such as her pay rate.

No information on fringe benefits was collected. As this is one of the characteristics of the jobs held by graduates which was in marked distinction to those held through "usual" WIN placements, and also distinguished the jobs held by employed graduates (all had medical insurance and all but one dental insurance and sick leave) from the jobs held by employed comparison group members and program dropouts (about half had a comparable benefit package), the absence of the value of these benefits in our calculation probably understates the earnings of these women.

As opposed to the type of manpower study to which cost/benefit analyses are usually applied, the participants in this program did not move through the programs as rigid cohorts, and were not observed for uniform amounts of time after graduation. It must be kept in mind that some of the women admitted to the training program dropped out of the training, returned to it, dropped out and returned again. Some failed entire terms and had to repeat them, others failed single courses and some of these spent a term re-taking a single course. At one extreme, four women graduated in 1980 with no interruptions in enrollment. At the other extreme, two other women were still enrolled in September 1982, four years after admission. Still other women who had dropped out of the program indicated in their last interview that they expected to be readmitted to the training program and complete it at a later date. In view of the re-admission policies of the schools, the possibility of future completions should not be ruled out.

The dropouts present another major analytic problem. There was a great deal of variation in the length of time dropouts had been enrolled in the program. Women who dropped out of the program left at any time; quite a number left in the first three months, others dropped out for the last time three years after initial enrollment. Rather than visualizing a group of women marching through the program in lock step fashion and leaving it en masse, we need to focus on an image of women trickling out at sporadic intervals. Some dropouts left the program so early that we have nearly four years of post-Bell & Howell labor force data for them, others dropped out so late that only a month or two had elapsed before the final interview.

It should also be noted that some of the women who completed the program graduated into an expanding labor market for electronics technicians, others into a recession. When the first women graduated from the program in 1980, the unemployment rate in Illinois was 8.3%; by 1982 it was 11.7%. In Ohio the comparable figures were 8.4% and 12.3%.

As a final limitation to the analyses presented in this chapter, we note that in the evaluation of education and manpower programs, it is standard practice to project lifetime earning streams in order to have a full picture of the benefits of these programs. The usual expectation is that a program's benefits do not cease within a short amount of time after the program ended.[22] However, after careful assessment of our research findings, we have determined that it is not possible to construct a projected lifetime earning stream for graduates in which we

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22. While investing in a training or education program, the trainee is earning nothing, or at least less than a comparable individual entering the job market. A prototypical diagram of the two earning streams for investment in human capital programs is shown in Figure VI-1. This figure indicates a set of curves for a trainee and a non-trainee. The

can place any confidence. The picture of likely future labor market experiences which emerges from analysis of the post-graduation follow-up period is simply too unclear. Therefore, we have limited our analyses to the relative costs and benefits during the observation period (22 months for the average graduate). Given the high cost and length of this training, one would expect to find that in this time span, the earnings of employed graduates would not have reached the amount required to the point where benefits equaled costs for any of the three perspectives used.

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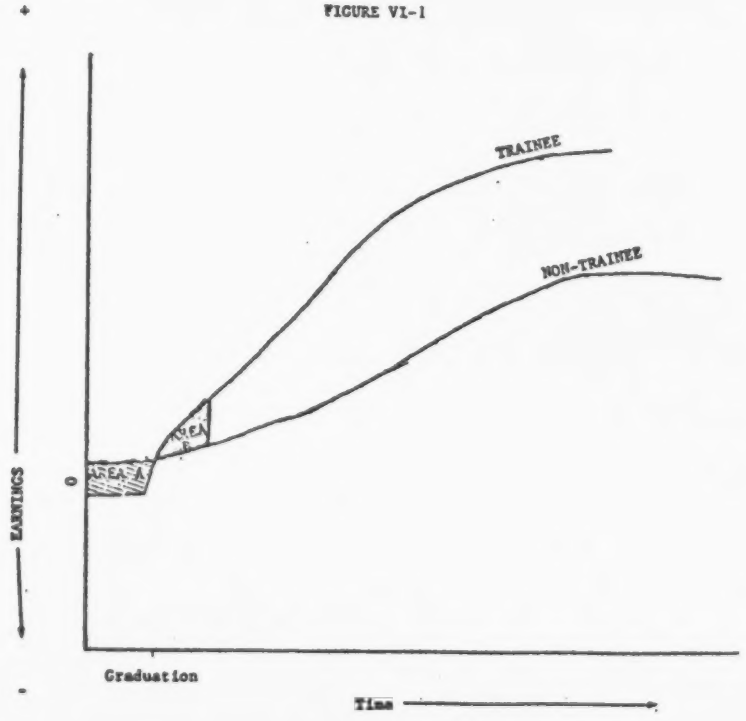
area of the trainee curve which is at zero indicates the time the individual is in the training program. The corresponding non-trainee curve is above zero, representing wages earned. From our expectations of the employment prospects of program graduates, we indicate in this model that the graduates will begin to earn more than non-graduates immediately after graduation, since electronics technicians on average earn more than the just over minimum wage salaries of most WIN placements. However, even with the earnings of the graduate being greater than those of the non-trainee, some time elapses before the extra earnings in (Area B) compensate for the lower earnings and cost of the training (Area A).

FIGURE VI-1



Adapted from: Gary S. Becker, Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education, Second Edition, New York, Columbia University Press, 1975.

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In presenting the analyses of the relative costs and benefits from each of the three perspectives discussed earlier, we are using several approaches. In an initial analysis, we compare the costs and benefits for all women in the original training group (dropouts and graduates), to those for the entire comparison group. Later, we repeat the analyses to explore whether there are any differences by study site, given the labor market differences discussed earlier in this report. Finally, we repeat the analyses comparing only graduates to comparison group members, as a proxy measure of the results that might be obtained if applicant screening and support services could be perfected to the point that nearly all program entrants completed the program.

The observation period for graduates is different from that for dropouts and comparison group members. For each graduate the period is from the time of her graduation until the time of her Phase III interview, an average of 22 months. For the others, the observation period is from January 1981 through the date of the Phase III interview, an average of 24 months.

Comparison Of All Participants And Comparison Group Members

Individual Perspective

Benefits. These are measured in this analysis as the difference in annual earnings between the experimental group and the comparison group during the post-graduation follow-up observation periods, a period of approximately 22 months for graduates on average, and 24 months for the Dropouts and Comparison Group members.

Earnings were determined as follows:

1. Calculations are based on those respondents for whom we have a completed job history from our interviews. These results are assumed to be representative of the non-respondents.

2. For each job held during the observation period, respondents were asked for: beginning and ending dates, hourly rates (exclusive of overtime and fringe benefits), the number of hours per week usually worked and the starting and ending date of employment at each job.

3. For purposes of this analysis, the final pay rate was assumed for the entire employment period, and this pay rate was converted to constant (1980) dollars.

4. The sums of the wages for each year are shown in Table VI-2. ; To calculate a figure for average annual earnings per person, the sum of the wages for each year was divided by the number of person years available to earn this wage for each group. The adjustment by person years was necessary to take into account that training participants were not available for employment while still enrolled in the training program. The results for each calendar year were then averaged over the three years in which post-graduation observations were made.

These calculations determined that the average annual earnings in 1980 dollars for members of the participant groups was $4,108, while for members of the comparison group it was $4,730. Subtracting these figures shows a difference in earnings of $622 dollars per year with the

TABLE VI-2

CALCULATION OF ANNUAL EARNINGS

	1980	1981 (1980 Dollars)	1982 (1980 Dollars)
Participants			
Total Wages.	$220,277	$429,617	$425,609
Available Person Years	65.9	93.7	102.2
Average Wage/Person Year	3,341/yr.	4,585	4,166
Average Across Years (Weighted by number of available person years)		$4,108	
Comparison Group			
Total Wages.	$438,581	$473,474	$421,892
Available Person Years	94	94	94
Average Wage/Person	4,666	5,037	4,488
Average Across Years		$4,730	

average comparison group member earning more than the average participant.

Costs. For this analysis, costs were defined as the opportunity costs to the participants (i.e. wages foregone while enrolled in the program). There is no need to consider the cost of tuition and books as these were not borne by the participants.

Our best estimate of the earnings foregone by each of the training participants is the average of the earnings of comparison group members during the time the participants were enrolled in the training program. An analysis of enrollment records shows that the average period of enrollment in the training program was 54 weeks.

A comprehensive job history for this period was obtained from comparison group members in interviews. We found that comparison group members were, on average, employed about 32% of the time and held as many as five jobs during the period. Participants were enrolled in the training an average of 54 weeks; during this time the comparison group member earned $2,579 (in 1980 dollars) on the average.

Benefit to Cost Ratio. The final step in this analysis is the computation of a ratio of benefits divided by costs. In this case the ratio is -$662/$2,579=-.24. As expected, with this brief follow-up period and no estimate of projected lifetime earning streams, and with our observation that program dropouts earn considerably less than either graduates or comparison group members, our analysis shows that the costs greatly exceed benefits.

From The Taxpayer's Perspective

Benefits. In this analysis, two benefits were calculated: the average reduction in welfare payments, and the average icrease in taxes paid.

The average reduction in welfare payments was computed separately for those who lived in Illinois and those who lived in Ohio. In each state, our computation was limited to the expenditures for AFDC, food stamps and Medicaid. Because official records for each individual are not available, our computations are based on the average annual expenditures for families with the characteristics of those of the women in this study. [23] State welfare officials were contacted to determine the average monthly benefits of the recipients from these programs in each state. The information received is shown in Table VI-3.

The percent of time between the Phase II and Phase III interviews that the participants and comparison group members did not receive each type of welfare benefit was then computed by site. The results of this computation are shown in Table VI-4. To simplify calculations, we elected to use the average monthly benefit rates for 1980, as this was the mid-point of the study observation period, and the time when most of the graduates did in fact graduate.

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23. Both the Aid to Families with Dependent Children and Food Stamp programs use family size to determine the amount of assistance a family receives. To compute the average benefit that could have been received by participants and comparison group members in each site, we first determined the average family size, which was 3.27 people for both comparisons and participants. We multiplied the difference between monthly payments for a family of four and a family of three by 0.27 and added that amount to the benefit for a family of three to arrive at the monthly AFDC payments and Food Stamp assistance.

Because the figures available for Medicaid benefit rates indicate there is a different average monthly benefit rate for adults and children, we assumed that the families consisted of one adult and 2.27 children in all calculations.

TABLE VI-3

WELFARE BENEFIT LEVELS IN ILLINOIS AND OHIO

BENEFIT TYPE	ILLINOIS				OHIO				
AFDC PAYMENTS	7/78-9/79	10/79-12/80	1/81-PRESENT		1978			1979-1982	
2 Person Family	$ 227	$ 238	$ 250		$ 192			$ 216	
3 Person Family	274	288	302		234			263	
4 Person Family	333	350	368		291			327	
FOOD STAMP BONUS VALUE		7/78-12/80	1/81-12/82		7/78-12/78	1/79-6/79	7/79-12/79	1980	1981
2 Person Family		$ 100	$ 128		$ 100	$ 106	$ 112	$ 115	$ 128
3 Person Family		144	183		144	152	161	165	183
4 Person Family		182	233		182	192	204	209	233
MEDICAID Payment per Recipient	FY78	FY79	FY80	FY81	FY78	FY79	FY80	FY81	
Adult	$ 733	$ 757	$ 956	$ 942	$ 625	$ 657	$ 737	$ 791	
Children	332	342	415	438	246	263	311	322	

Sources:

Illinois Department of Public Aid, Springfield.
Ohio Department of Public Welfare, Columbus.
Social Security Administration, Health Care Financing Administration.

TABLE VI-4

PERCENT OF TIME THE AVERAGE RESPONDENT DID NOT RECEIVE WELFARE BENEFITS BETWEEN THE PHASE II AND PHASE III INTERVIEWS

BY BENEFIT CATEGORY

BENEFIT CATEGORY	ILLINOIS		OHIO	
	PARTICIPANTS	COMPARISON GROUP	PARTICIPANTS	COMPARISON GROUP
AFDC	41%	37%	49%	65%
FOOD STAMPS	43	31	46	61
MEDICAID	44	37	54	67

The final steps in the calculation were to:

1. Calculate and average annual benefit for each state for each category of welfare
2. Multiply the result by the percent of time study participants were not receiving each type of welfare (by site).
3. Add the average annual savings from each program into one composite measure
4. Compute a weighted average to combine the figures from Illinois and Ohio for participants and comparisons; and
5. Subtract the savings for the average comparison group members from the savings for the average participant.

These calculations are summarized in Table VI-5.

The net result of these calculations is that on average, the reduction in the welfare benefits received by the average participant in the post program observation period was $389 less than that for the average comparison group member. The considerable site differences shown in Table VI-5 should be noted.

The other benefit from the taxpayer's perspective is the average increase in income taxes collected from earnings of the participants. To determine the average increase in taxes collected, we calculated the duration, wage and hours worked of each job held between the Phase II and Phase III interviews for each of the participants and controls. From this, annual earnings were determined for each woman.

Using this annual earnings figure and assuming an average family size of 3.27 persons, we then calculated the taxes paid by each woman for Federal income taxes (less the Earned Income Credit), state and local income taxes, and Social Security (FICA). Table VI-6 shows the average of these taxes for the participants and comparison group in Illinois and Ohio.

TABLE VI-5

CALCULATION OF AVERAGE REDUCTION IN WELFARE PAYMENTS

STUDY PARTICIPANT CATEGORY	BENEFIT CATEGORY	AVERAGE BENEFIT PER YEAR	AVERAGE PERCENT OF TIME NOT RECEIVED	AVERAGE AMOUNT SAVED	AVERAGE ANNUAL SAVINGS PER PERSON
ILLINOIS					
PARTICIPANTS	AFDC	$ 3660	41%	$ 1,501	
	FOOD STAMPS	1,8$8	43	795	
	MEDICAID	2,076	44	913	
					$ 3,209
COMPARISON GROUP	AFDC	3,660	37%	1,354	
	FOOD STAMPS	1,848	31	573	
	MEDICAID	2,076	37	768	
					2,695
OHIO					
PARTICIPANTS	AFDC	3,360	49%	1,646	
	FOOD STAMPS	2,124	46	977	
	MEDICAID	1,577	54	852	
					3,475
COMPARISON GROUP	AFDC	3,360	65%	2,184	
	FOOD STAMPS	2,124	61	1,296	
	MEDICAID	1,577	67	1,056	
					4,536

WEIGHTED PARTICIPANT GROUP AVERAGE
WELFARE SAVINGS PER PERSON = $3,360.

WEIGHTED COMPARISON GROUP AVERAGE
WELFARE SAVINGS PER PERSON = $3,749

AVERAGE REDUCTION IN WELFARE COSTS = -$389.

TABLE VI-6

ESTIMATED TAXES PAID BY STUDY PARTICIPANTS

(1980 DOLLARS PER PERSON)

	SOCIAL SECURITY	FEDERAL INCOME TAX [1]	STATE INCOME TAX	TOTAL
ILLINOIS PARTICIPANTS				
1980	$257	$207	$66	$530
1981	349	483	95	927
1982	362	498	101	961
OHIO PARTICIPANTS				
1980	164	20	12	197
1981	268	178	23	469
1982	236	242	29	508
COMPOSITE PARTICIPANT AVERAGE				
1980	207	107	37	352
1981	306	322	57	686
1982	293	357	62	712
Annual Average				583
ILLINOIS COMPARISON GROUP				
1980	247	372	72	692
1981	290	324	73	686
1982	237	215	60	512
OHIO COMPARISON GROUP				
1980	316	362	36	714
1981	370	364	39	773
1982	350	361	38	749
COMPOSITE COMPARISON GROUP AVERAGE				
1980	286	367	52	704
1981	335	347	53	735
1982	301	297	48	646
Annual Average				695

[1] The figure given for Federal Income Tax includes the estimated Earned Income Credit.

Table VI-6 shows that the average estimated taxes paid per member of the participant groups was $583 over the observation period. It is also interesting to note that the amount of taxes paid increased each year during the period. For the average member of the comparison group, the average estimated taxes per year was $695, or $112 per year more than the members of the participant group. However, the average taxes per year was level over the observation period.

Costs.

The expenses incurred in running the program were obtained from Bell & Howell's records. An examination of the vouchers sent to the WIN program for tuition, supplies, books and fees for the women enrolled in the training at the schools in Chicago and Columbus indicate that the average cost was $3,075 per participant in 1980 dollars. Bell & Howell estimates there was an additional $597 cost per person for counselors, tutoring and seminars paid out of their training grant from DOL. The sum of these two calculations gives a cost of $3,672 (in 1980 dollars) per participant. Table VI-7 breaks down the expenses (in 1980 dollars) by category.

Benefit to Cost Ratio. As with the analysis from the individual perspective, the final step is the calculation of a ratio by dividing benefits by costs. The sum of the two benefits, the reduction in welfare and the increase in taxes is $389 plus $112 = $501, and the cost is $3,672. Therefore, the benefit to cost ratio is $501/$3,672 = 0.136. Again, as expected, the benefits do not outweigh costs.

TABLE VI-7

BELL & HOWELL TRAINING COSTS

(1980 DOLLARS)

	TUITION [1]	FEES	BOOKS AND SUPPLIES	TOTAL
CHICAGO				
1978	$56,119	$4,835	$6,573	$67,527
1979	57,744	2,037	10,590	70,371
1980	32,594	140	5,414	38,148
1981	4,999	62	413	5,474
1982	277	0	49	326
Chicago Total				$181,846
Average per Participant				$3,031
COLUMBUS				
1978	36,599	2,984	4,364	43,947
1979	102,471	2,719	21,041	126,231
1980	43,068	373	6,476	49,917
1981	13,898	166	1,216	15,280
1982	884	26	52	962
Columbus Total				$ 236,337
Average per Participant				$3,110

WEIGHTED AVERAGE COST PER PARTICIPANT = $3,075

[1] The tuition figure has been adjusted for Pell (BEOG) Grant money, and for partial tuition refunds for dropouts.

From The Social Perspective

This perspective involves the measurement of such benefits as the net increase in income, as well as reduced unemployment, increased national production, etc., in society. [24] The elements used in our analysis to compute the ratio are the same as those used in the previous analyses.

Benefits. In this analysis, the benefit of the program is measured as the difference in annual earnings between the participants and comparison group during the post-graduation observation period. Earlier, this difference was shown to be -$622.

Costs. The measure of costs for this perspective is the opportunity cost to participants, earlier determined to be $2,759; and the expenses incurred in running the program, which was determined to be$3,672 per participant.

We have estimated that participants received WIN incentive payments and payments for transportation and childcare of $50 per month for each month they continued in the program. This amount did not change during the observation period. It has been adjusted to 1980 dollars in our calculations corresponding to the dates participants were enrolled. At an average of 12.4 months of enrollment per participant, the incentive payments are $703 per person (in 1980 dollars).

Benefit to Cost Ratio. The ratio from this perspective is -$622 divided by $7,134, or -0.09. Yet again, it is found that the costs far exceed the benefits.

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24. Michael E. Borus, Measuring the Impact of Employment-Related Social Programs Kalamazoo, Michigan, W.E. Upjohn Institute for Employment Research, 1979.

Cost Benefit Analyses By Site

In preparing the data required for the above analyses, and from other data gathered during the study, we have become aware of large differences in the labor force experience of study participants in the two sites in which the demonstration took place. We thought it might be valuable, therefore, to determine whether there was a relationship between study site and the cost/benefit analysis of the program in that site.

The analyses were conducted from the same three perspectives as presented above. Also, the calculation of each data element was the same, the analysis was simply done on different subsets of the entire study population.

From The Individual Perspective

Benefits. The benefit for this part of the analysis is measured as the difference in annual earnings during the observation period. As shown in Table VI-8, the mean earnings per year in 1980 dollars for the participants in Chicago was $4,945 and in Columbus $3,413. For the comparison group in Chicago the average earnings per year was $3,979 and in Columbus $5,311. The resulting figures were subtracted, showing that on the average, members of the Chicago participant group earned $966 per year more, while in Columbus, members of the participant group earned $1,898 per year less.

Costs. The costs are measured as the opportunity costs to participants. In Chicago, the average opportunity cost during the 55 weeks the average participant was in the training was $2,724 (in 1980

TABLE VI-8

CALCULATION OF ANNUAL EARNINGS

	1980	1981 (1980 Dollars)	1982 (1980 Dollars)
CHICAGO			
Participants			
Total Wages.	$127,390	$232,563	$236,351
Available Person Years	30.4	44.3	43.8
Average Wage/Person Year	4,188	5,246	5,402
Weighted Average Across Years		$4,945	
Comparison			
Total Wages	$165,661	$178,894	$144,855
Available Person Years.	41	41	41
Average Wage/Person Year.	4,040	4,363	3,533
Weighted Average Across Years		$3,979	
COLUMBUS			
Participants			
Total Wage.	$ 92,887	$198,941	$189,258
Available Person Years.	34.7	49.3	53.7
Average Wage/Person Year.	2,679	4,033	3,527
Weighted Average Across Years . .		$3,413	
Comparison			
Total Wages	$272,920	$294,500	$277,037
Average Person Years.	53	53	53
Average Wage/Person Year.	5,149	5,557	5,227
Weighted Average Across Years . .		$5,311	

dollars). In Columbus, the corresponding figure for the 53 week period the average participant was attending training was $4,106.

Benefit to Cost Ratio. The ratio of benefits to costs is calculated as $966 divided by $2,724, or 0.35 in Chicago. In Columbus, the corresponding ratio is -$1,898 divided by $4,106, and the ratio is -0.46. Thus, while the costs exceed the benefits in both sites, in Chicago, the ratio is positive, indicating that participants have begun to earn more than they would if they had not been in the program, and have begun to make up the income they gave up to be trained. In fact, if one calculates the "pay-back period,"[25] the time required for the excess in benefits to equal the investment in the program, the Chicago participants will pay back their investment in just under three years after graduation. In Columbus, the average program participant is earning less than the average comparison group member, and has made no progress in making up the income foregone while in the training program.

From The Taxpayer's Perspective

Benefits. The calculation of the reduction of welfare benefits, one of two benefits from this perspective, is summarized in Table VI-9. The net result is that in Illinois, on average, the reduction in the welfare benefits received by the average participant in the post program period was $514 more than that for the average comparison group member. In Columbus, on the other hand, the net reduction in welfare payments received by the average participant in the same period was $1,061 less than the reduction for the average comparison group member.

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25. Richard Silkman, et. al., "An Evaluation of Two Preemployment Services: Impact on Employment and Earnings of Disadvantaged Youths," Evaluation Review, Vol. 7, No. 4, August 1983, pp. 467-496.

TABLE VI-9

CALCULATION OF AVERAGE REDUCTION IN WELFARE PAYMENTS

STUDY PARTICIPANT CATEGORY	BENEFIT CATEGORY	AVERAGE BENEFIT PER YEAR	AVERAGE PERCENT OF TIME NOT RECEIVED	AVERAGE AMOUNT SAVED	AVERAGE ANNUAL SAVINGS PER PERSON
ILLINOIS					
PARTICIPANTS	AFDC	$ 3660	41%	$ 1,501	
	FOOD STAMPS	1,848	43	795	
	MEDICAID	2,076	44	913	
					$ 3,209
COMPARISON GROUP	AFDC	3,660	37%	1,354	
	FOOD STAMPS	1,848	31	573	
	MEDICAID	2,076	37	768	
					2,695
OHIO					
PARTICIPANTS	AFDC	3,360	49%	1,646	
	FOOD STAMPS	2,124	46	977	
	MEDICAID	1,577	54	852	
					3,475
COMPARISON GROUP	AFDC	3,360	65%	2,184	
	FOOD STAMPS	2,124	61	1,296	
	MEDICAID	1,577	67	1,056	
					4,536

AVERAGE REDUCTION IN WELFARE COSTS

ILLINOIS = $514 OHIO = -$1,061

Table VI-6 above broke out the increases in taxes paid by the participants in the two study sites. It shows that the average estimated taxes paid per member of the Illinois participant groups was $793 over the observation period, while in Columbus it was $320. For the average member of the Illinois comparison group, the average estimated taxes per year was $448, or $255 per year less than the members of the Illinois participant group. In Ohio, the average member of the comparison group paid $580 per year in taxes over the observation period, or $260 more than the members of the Ohio participant group.

Costs. The costs considered under this perspective are those for the training program. This was summarized by site in Table VI-7 above. This showed that in Chicago the average cost was $3,628 per participant in 1980 dollars, while in Columbus it was $3,707.

The Benefit to Cost Ratio. The benefit to cost ratio in Illinois for this perspective is the $514 in increased reduction in welfare benefits plus the $255 in increased taxes, to be divided by the $3,628 per participant program cost in Illinois. The result is 0.21. In Columbus, the ratio is a negative $1,061 welfare reduction plus a negative $260 increase in taxes, divided by a $3,707 per individual program cost, or -0.36. Again, while the costs exceed the benefit, the picture is far brighter in Illinois, where if all things remain the same, the taxpayer will have his investment "paid back" four and three-fourths years after graduation.

From The Social Perspective

As before, the measure of benefits under this perspective is the difference in annual earnings. This was found to be $966 in Chicago and -$1,898 in Columbus. The costs are measured as opportunity costs to the participants, which was found to be $2,724 in Chicago and $4,106 in Columbus; plus the expenses in running the program, which were $3,628 in Chicago and $3,707 in Columbus plus the cost of the WIN training incentives, which were estimated to be $717 in Chicago and $691 in Columbus.

The benefit to cost analysis is then $966 divided by $2,724 plus $3,628 plus $717 in Chicago, or 0.14; and -$1,898 divided by $4,106 plus $3,707 plus $691 in Columbus, or -0.22. Again, from this perspective benefits were not found to outweigh the costs. But, in Chicago, the pay-back period can be estimated at seven years.

Graduate Versus Comparison Analysis

As a final analysis, we have conducted an analysis which compares the training program graduates against the comparison group. This may present a proxy measure for what results might be expected if; it were possible to select enrollees so well that all would complete the program.

All calculations were done exactly the same as in the total participant group/comparison group analysis. All the data for program dropouts has simply been deleted for this analysis.

From The Individual Perspective

Benefits. As shown in Table VI-10, the annual earnings for the average graduate during the observation period was $9,533 in 1980 dollars. For the members of the comparison group it was $4,730. The subtraction of these figures shows that on the average, graduates earned $4,803 per year more than the members of the comparison group.

Costs. The opportunity cost for Graduates during the 107 weeks that the average graduates were enrolled in the training was $7,652 (in 1980 dollars).

Benefit to Cost Ratio. The ratio of the benefits divided by the costs is $4,803 divided by $7,652 or 0.63, showing that even for graduates alone, the earnings of the first months after graduation did not make up for the wages foregone during training. However, the pay-back period for the individual is 1.6 years.

From The Taxpayer Perspective

Benefits. The calculation of the average reduction of welfare benefits is shown in Table VI-11. The net result of these calculations is that on average, the reduction in the welfare benefits received by the average graduate in the post program observation period was $774 more than that for the average comparison group member. The second benefit to be considered was the increase in taxes paid. Table VI-12 shows that the average estimated taxes paid per graduate was $1,706 per year over the observation period. For the average member of the comparison group, the average estimated taxes per year was $523, or $1,183 per year less than the average graduate.

TABLE VI-10

CALCULATION OF ANNUAL EARNINGS

	1980	1981 (1980 Dollars)	1982 (1980 Dollars)
Graduates			
Total Wages	$ 93,638	$206,273	$225,504
Available Person Years.	7.2	24.8	31.3
Average Wage/Person Year.	13,066	18,306	7,228
1980-82 Average		$9,533	
Comparison Group			
Total Wages	$438,501	$473,474	$421,892
Available Person Years.	94	94	94
Average Wage/Person Year.	4,666	5,037	4,488
1980-82 Average		$4,730	

TABLE VI-11

CALCULATION OF AVERAGE REDUCTION IN WELFARE PAYMENTS

STUDY PARTICIPANT CATEGORY	BENEFIT CATEGORY	AVERAGE BENEFIT PER YEAR	AVERAGE PERCENT OF TIME NOT RECEIVED	AVERAGE AMOUNT SAVED	AVERAGE ANNUAL SAVINGS PER PERSON
ILLINOIS					
GRADUATES	AFDC	$ 3660	60%	$ 2,196	
	FOOD STAMPS	1,848	66	1,220	
	MEDICAID	2,076	66	1,370	
					$ 4,786
COMPARISON GROUP	AFDC	3,660	37%	1,354	
	FOOD STAMPS	1,848	31	573	
	MEDICAID	2,076	37	768	
					2,695
OHIO					
GRADUATES	AFDC	3,360	61%	2,050	
	FOOD STAMPS	2,124	50	1,062	
	MEDICAID	1,577	72	1,135	
					4,247
COMPARISON GROUP	AFDC	3,360	65%	2,184	
	FOOD STAMPS	2,124	61	1,296	
	MEDICAID	1,577	67	1,056	
					4,536

WEIGHTED GRADUATE AVERAGE
WELFARE SAVINGS PER PERSON = $4,523.

WEIGHTED COMPARISON GROUP AVERAGE
WELFARE SAVINGS PER PERSON = $3,749

AVERAGE REDUCTION IN WELFARE COSTS = $774.

TABLE VI-12

ESTIMATED TAXES PAID BY STUDY PARTICIPANTS

(1980 DOLLARS PER PERSON)

	SOCIAL SECURITY	FEDERAL INCOME TAX [1]	STATE INCOME TAX	TOTAL
ILLINOIS GRADUATES				
1980	$889	$711	$232	$1,832
1981	565	1,047	164	1,776
1982	671	1,294	207	2,172
OHIO GRADUATES				
1980	972	671	75	1,718
1981	541	594	58	1,193
1982	471	790	75	1,336
COMPOSITE GRADUATE AVERAGE				
1980	906	702	199	1,807
1981	555	859	120	1,534
1982	568	1,035	139	1,742
Annual Average				1,694
ILLINOIS COMPARISON GROUP				
1980	248	3712	72	692
1981	290	324	73	687
1982	238	215	60	513
OHIO COMPARISON GROUP				
1980	316	362	36	714
1981	370	364	39	773
1982	350	361	38	749
COMPOSITE COMPARISON GROUP AVERAGE				
1980	286	367	52	705
1981	335	347	53	735
1982	301	297	48	646
Annual Average				695

1 The figure given for Federal Income Tax includes the estimated Earned Income Credit.

Costs. The expenses incurred in running the program are the only costs considered under this perspective. The examination of training program records shown in Table VI-13 indicates that the average costs (in 1980 dollars) was $4,828 per graduate. To this we have added the $597 per graduate estimated cost of the additional counseling and tutoring received by program participants, bringing the total program cost to $5,425 per graduate.

Benefit to Cost Ratio. Under this analysis, the benefit to cost Ratio is $774 plus $1,183 divided by $5,425, or 0.36. The pay-back period is 2.7 years.

From The Social Perspective

The benefits are measured and the difference in annual earnings, which was found to be $4,803 per year. The costs are the opportunity cost to the graduates of $7,652 in 1980 dollars, and the training program costs, or $5,425 per graduate, plus the WIN training incentives of $1,532 per person. The benefit to cost ratio calculated from these figures is 0.33.

Conclusion

Participation in this training program required a major investment on the part of the program participant, the taxpayer and society. The analyses presented in this chapter indicate that during the short post-training observation period available to this study, the monetary benefits attributable to the training program fell far short of the costs. However, this was not unexpected. Without the projection of lifetime earning streams, it would require a tremendously successful and sustained performance on the part of practically all women who

TABLE VI-13

BELL & HOWELL TRAINING COSTS

(1980 DOLLARS)

	TUITION [1]	FEES	BOOKS AND SUPPLIES	TOTAL
CHICAGO GRADUATES				
1978	$22,937	$1,680	$2,703	$27,320
1979	23,722	505	5,107	29,334
1980	26,878	135	4,378	31,391
1981	2,197	62	228	2,487
1982	0	0	0	0
Chicago Total				$90,538
COLUMBUS GRADUATES				
1978	7,955	794	1,196	9,855
1979	27,885	627	10,499	39,011
1980	29,699	329	4,618	34,646
1981	12,045	161	1,026	13,232
1982	884	26	52	962
Columbus Total				$ 97,706

WEIGHTED AVERAGE COST PER GRADUATE = $4,828

[1] The tuition figure has been adjusted for Pell (BEOG) Grant money, and for partial tuition refunds for dropouts.

participated in the program to repay so large an investment so quickly. No training program for welfare mothers can be expected to yield this outcome.

VII. SUMMING UP: FINDINGS AND RECOMMENDATIONS

The data presented in this report are voluminous, complex, and at times appear contradictory. Chapters IV and V point to substantial labor market successes for employed graduates; the cost-benefit analyses presented in Chapter VIII suggest that in the aggregate, program costs exceeded benefits as measured during the study period. In this chapter, we will seek to sort out and interpret these findings so as to be able to answer the "bottom line" question of greatest interest to policy-makers: what is the real pay-off of programs of this type, and can they be altered to yield higher cost-benefit ratios?

We will first look at the three topics which need to be fully understood to evaluate program outcomes: the dropout issue, the employment potential of able welfare recipients, and labor market problems of program graduates. Our recommendations conclude this chapter.

1. The Drop-Out Issue

Many readers of this report will be displeased by the over-all dropout rates reported in Chapter IV: over two-thirds of the women who were enrolled in the program failed to graduate, and, in the aggregate, this group did not benefit from its (mostly brief) participation in the project.

As we discussed earlier, the high dropout rate may have been in part the result of hasty recruitment to meet administrative deadlines. But it must be understood that post-secondary vocational programs are generally characterized by low completion rates, a fact not widely

publicized by community colleges and private and public training institutions. Students in many of these programs are typically young adults with unclear career goals and limited knowledge of the characteristics and requirements of the occupations for which they seek training. Their high-school background may not be strong. The completion rates of the "regular" Bell and Howell student body is roughly comparable to that of the WIN enrollees, with graduation rates of between 35 percent and 55 percent of cohorts.

We have also shown that among the WIN participants, the dropout group is a very heterogeneous one. Some portion of this population might be described as selection failures, whose marginal suitability for the program was further impaired by the nature of the remedial program in which they were initially enrolled. But the group also includes a number of able and work-oriented individuals who drop out of training in favor of immediate employment. The extent to which such persons benefited from exposure to the electronics training program has not been fully investigated, but employment and earnings data suggest that there were some beneficial effects for these persons.

Our careful analysis of factors related to dropping out (which might be taken into account when selection criteria are considered for future programs) point primarily to academic variables: students with stronger high-school preparation and achievement, who could enter the technician program directly without first enrolling in a remedial one-term preparatory program, were more likely to graduate. However, we feel that it would be a mistake to translate this finding into higher academic eligibility requirements in future programs. For one thing, such requirements would severely narrow what is already a limited population of eligible training candidates (according to our rough

estimates, 10% of all AFDC mothers would be eligible participants under the criteria adopted for this demonstration). More important, the "prep" program in place in Chicago and Columbus was viewed critically by Bell & Howell's own staff, and more structured and electronics-specific preparatory programs have been recommended for future students. Last but not least, it should be stressed that those remedial students who did not drop out (and they accounted for about 40% of the total number of graduates) were at least as successful in finding jobs as the better qualified participants who started directly into the technical program, with 73 percent of the former, as against 69 percent of the latter obtaining a job following graduation.

On balance, it would seem most realistic to accept the notion that expectation of a relatively high dropout rate must be factored into these programs, given the fact that we have few good "predictor" variables and that the competing responsibilities and vagaries of life on welfare often constitute severe impediments to the completion of a lengthy and demanding program. Rather than screening out initially too many "high-risk" candidates, however defined, it might be better to follow the policies adopted by some colleges and vocational schools who have fairly rigorous policies about re-admission of dropouts, repetition of failed courses, etc. Our data have shown that students who have trouble meeting the demands of the program, even if they manage to graduate, are often unsuccessful in finding jobs in the field for which they were trained.

2. Employment Opportunities For Able AFDC Mothers

One of the surprising findings of this study was the relatively high level of employment experienced by the comparison group, i.e., the women who were qualified to enter the electronics training program, but were not selected. Only one-third of this group had not worked at all during the study period (a period of approximately four years), although 60 percent were not working at the time the last contact was made, in late 1982 or early 1983. Although their average wages were well below those earned by program graduates, they were above the minimum wage; a few of these women had held well-paid jobs. Actually, this finding is in line with earlier research by other investigators which showed low-income households shifting in and out of welfare dependency at frequent intervals.[26] There were also special circumstances which may have resulted in better-than-average labor market experience for the comparison group. Our interviews and discussions with WIN officials suggest that the recruitment and screening process conducted for this demonstration program identified the members of the comparison group as highly qualified and motivated. In the WIN system which rewards counselors for placements, it is probably safe to assume that considerable effort was exerted to place these "easily employable" clients. There is also considerable anecdotal evidence of feelings on the part of the counselors that the random assignment of women to the comparison group was unfair; these counselors were said to have made

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26. See Morgan, James N., "Five Thousand American Families--Patterns of Economic Progress." Survey Research Center, ISR, University of Michigan, Ann Arbor, 1974, 1976.

special efforts, especially in the identification of other training opportunities, in order to compensate these women for their non-selection for the Bell & Howell training. Finally, some of the women also felt the assignment process was unfair, and report that this motivated them to search for employment and training in order to "show" the organizers of this demonstration that a mistake had been made in not selecting them. In fact, given these circumstances, the earnings and stability of employment results for the comparison group are unimpressive and suggest that the regular WIN program as it currently operates is not organized to provide placement or training services which would enable large numbers of well-qualified and highly motivated welfare recipients to achieve well-paying, "career" jobs and economic independence.

However, given the time-frame for the cost/benefit analysis (four years during which the comparison group was available for work and did in fact work a sizable proportion of the time, and during which graduates had on the average one and one-half years of labor market availability), we are left with the conclusion that at least in the short run and in cost-benefit terms, there is no quick payoff from a long and intensive program. There are slight indications that over time, the cost-benefit ratios will tend to favor the graduates: their average wages are higher and they are less likely to receive any public subsidies (at the time of the last contact, 36% of the graduates as against 31% of the comparison group were enrolled neither in WIN nor in AFDC). As previously discussed, these cost-benefit ratios also do not take into account fringe benefits, such as health insurance or paid leave, which might increase the earnings and subsidy differential (health insurance may eliminate the use of Medicaid). But this is

speculation. Only cost/benefit analysis using a longer time-frame, and studies of the employment experience of able AFDC mothers in an unmanipulated setting--one in which they and the WIN staff are not subject to the extra motivation which resulted from the introduction of the demonstration program--can provide definitive answers.

3. Labor Market Problems Of Program Graduates

Completion of a high-quality training program offered by a superior institution with an excellent placement record does not guarantee a job to every graduate. Women who had done well in the program, as demonstrated by high grades and on-schedule program completion, were most likely to find jobs; short prior welfare tenure and residence in the city with more favorable labor market conditions for the training occupations (Chicago) were also contributing factors. The difficulties encountered by recent program graduates were not confined to WIN students; Bell & Howell placement officials reported greater difficulties since 1981 in placing their regular graduates, with employers listing fewer vacancies and becoming more selective in their recruitment practices.

Nevertheless, the great majority of graduates found jobs after program completion, and most of them continued to hold these jobs (or landed others, if the first one did not work out). Of the 48 graduates for whom we had data in the early post-graduation period, (1981 and 1982), 71 percent had found a job. All but one of these were full-time, and all but two were in an electronics-related field. The average starting salary was close to $13,000 (in 1980 dollars), and all but two women earned in excess of $10,000. A year or so later, an attempt was made to re-contact these graduates as well as others who had graduated

later. Unfortunately, we were unable to locate more than 40 of the 52 women who had graduated from the program: a few refused to be interviewed but the majority could not be located despite lengthy and painstaking attempts to contact them or their relatives or to obtain information from public agencies. Thus the data on jobs held in 1983 may understate the extent to which graduates were working since a high proportion of the movers may have moved for job-related reasons. But for the 40 graduates whom we could locate, the picture was less rosy than it had been a year earlier: 42 percent were employed, and 20 percent were currently unemployed although they had worked earlier. The remaining 38 percent had never worked since graduation (some of these were recent graduates, who had had a relatively short time available for job search).

Despite the problems inherent in analyzing these data, given the small numbers, differences in graduation times, and loss of unlocatable study subjects, the existence of placement and job retention difficulties is undeniable. In addition to recession-related labor market causes, we have identified a number of other issues which impeded placement and retention. Two of these might be amenable to administrative remedy.

Although WIN provided the trainees with a considerable body of support services during the training period, little thought had been given to the need for a support structure during the transition from school to work, yet the absence of such assistance impeded placement and retention in a number of cases. Relocation which seemed especially necessary for Columbus graduates required temporary financial resources (even if employers provided some reimbursements) beyond the reach of most graduates. But even those who remained in the same locality

experienced difficulties in meeting certain essential expenses. With no financial base or established credit, replacing services provided by public aid with the first few earned paychecks may prove impossible. The problem of a substitute for free medical services is especially acute. These transition problems are greater for those who must relocate, as they incur larger expenses, and are less secure of obtaining any services from public aid because of regulations in the new jurisdictions.

The level of appropriate support services is a debatable issue. One might argue that the present level is so high that it creates dependence and will hinder the transition to economic self-sufficiency. Would it not be kinder in the long run, this argument might state, to reduce the level of services during the training program so that the women could learn to cope while still in a sheltered environment? While we do not endorse this sentiment, we do recognize some merit in observations of dependency and the problems that it can cause when the women leave the welfare system.

The second issue is that of work experience. There is no doubt that many of these graduates would be in a better competitive position if they could point to some recent work experience, preferably related to the field of electronics, since few have any directly related work experience to include in their resumes and some have no work experience at all. Most Bell & Howell students work part-time while attending school and although most of these part-time jobs are not in the electronics field, they have the advantage of providing a recent work reference to the graduate during the job search.

Currently, there are two major constraints preventing the DOL students from working part-time. One is their family situation. WIN regulations do not allow for payment for childcare for times when the students are not in school related activities. The second is the problems that would arise from the increase in income resulting from part-time employment. For some women, this increase would make them ineligible for AFDC benefits and thus the training program itself. Others would find that the loss of benefits would more than offset the increase in income, making the work experience a source of economic hardship.

Some thought might be given to granting exceptions to women participating in this sort of training program who also wish to have directly relevant part-time employment. The additional cost for extra childcare or for not reducing benefits might be more than made up by the increased employment potential and program performance of the trainees. Should it be decided that changes cannot be made in the regulations, some modifications to the training might be considered to give more exposure to the actual working environment, instead of the current mix of classroom and laboratory work.

Ideally, part-time work-experience with or without pay should be arranged in employment settings where opportunities for post-graduation jobs are favorable, and with employers prepared to make some hiring commitment to students whose performance is satisfactory.

4. Is High-Quality Training A Viable Option For Portions Of The AFDC Population?

We feel that this program has demonstrated the existence of a small but significant segment of the welfare population with the ability and motivation to undertake long-term, high-quality training. It is likely that only a fraction of those who start in such training programs will last the full course but this need not be a major consideration, especially if those for whom the program is not suitable can be weeded out quickly. However, considerable thought should be given to the occupation for which the training is provided. It is not clear in retrospect that electronics technician training was a happy choice. The occupation was selected because it paid a high salary, was expected to be in increasing demand by employers, and was an occupation for which the funding agency felt the WIN population could be trained.

However, there were problems. Not only is the occupation male-dominated, but the training setting was a predominantly white, male environment which caused many of the women some anxiety and diminished self-esteem. Further, the training for the occupation is long and difficult, perhaps too difficult. Although the women were asked to commit themselves to a one and one-half year program, they spent a considerable longer period in training because of the prep program and the need to repeat courses: the average training time for graduates was twenty-six months, rather than the anticipated twenty months. While there were some honor graduates, many women graduated with the minimum grade average required and many more flunked out. Finally, it was not an occupation for which there was a large, local labor market in the

training sites. Many of the graduates of the Chicago school had to accept positions in distant suburbs, which meant moving or long, expensive daily commutes. Other Chicago graduates and a number of the Columbus graduates had to move out of state to find work. This prospect convinced some women to stay out of the labor market and others to accept local low-paying positions for which they were over-qualified.

Of course, the occupation was precisely selected because it is male-dominated, making it highly probable that successfully placed female WIN graduates will earn enough income and receive benefits that are adequate for them to become permanently independent of the welfare system. To find the ideal training occupation-- one for which there is a good local labor market, with less demanding training and a high wage structure--is a difficult assignment for agency staffs.

Were money to be made available for future high quality demonstration programs, we would like to recommend exploring other possibilities. Training in word processing and computer operations and some of the health professions, for example, which appear dominated by neither sex at present, which require training at a manageable level of difficulty, and for which there are at present expanding markets in most major urban areas, would seem to be natural choices for subsequent demonstration programs. By offering various high skill training alternatives simultaneously, a better fit between the interests, abilities and circumstances of each client with the target occupation would be possible. It is true that not all of these alternatives would lead to positions which are as lucrative as those obtained by the most successful electronics program graduates, but perhaps, given the constraints under which many AFDC recipients operate, a trade-off between high earnings for a few and higher completion and placement rates for many should be considered.

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APPENDIX A

THE BELL & HOWELL ELECTRONICS TECHNICIAN CURRICULUM -- 1978

The Preparatory Studies Curriculum.

Mathematics: mathematical skills in arithmetic including: whole numbers, factors, fractions, decimals and percentages.

Science for Electronics: basic physical science including: motion, energy, atomic structure, vibrations and waves, sound, electrostatics, magnetism and heat.

Communications Skills: basic features of standard English: noun plurals and possessives, making subjects and verbs agree, punctuation, and spelling.

First Trimester (TECH 1).

Electricity 1: Basic concepts of electricity and electrical circuits.

Basic Electronics 1: survey of the field of electronics, and a study of electronic devices such as transistors and printed circuits.

Mathematics 1: equations and formulas, graphs, ratios, trigonometric ratios.

Technician Electronics Laboratory: practice with various devices and circuits, reading schematic diagrams, fabrication of circuits, use of basic test equipment, troubleshooting of circuits and units, fabrication of a testing instrument.

Second Trimester (TECH 2).

Electricity II: continuation of Electricity I with emphasis on AC circuits including: frequency effects in RLC circuits, impedence matching, passive waveshaping and modulation principles.

Basic Electronics II: integrated circuits, low-frequency and high-frequency amplifiers, oscillators, multivibrators, and clippers and clampers.

Mathematics II: right triangles, monomials, and polynomials, logarithms.

Technician Electronics Laboratory: practical exercises, fabrication or breadboarding of electronic circuits, use of oscilloscope, troubleshooting.

Third Trimester (TECH 3).

Digital Circuits and Systems: digital logic and switching circuits, computer memories.

Digital Computers: study of the digital computer as a system, computer trouble isolation techniques, computer structure and organization.

Computer Interface: computer communications, transmission codes, digital-analog and analog-digital convertors.

Technician Electronics Laboratory: practical exercises related to digital circuits and computers, troubleshooting.

Communications Skills: written communication skills, grammar, spelling and punctuation. Papers are written in which classroom and laboratory subjects are discussed. (This course [redacted] offered in any of the first three trimesters.)

Fourth Trimester (TECH 4).

Two-Way Radio: study of various two-way radio circuits and systems.

Consumer Audio-Radio Systems: basic AM and FM receivers, audio amplifiers.

Special Communication Systems: functional systems which are a part of radio communication including regulated power supplies, transmission lines and antennas, microwave devices and applications are also discussed.

Technician Electronics Laboratory: practical exercises to develop familiarity with radio systems and the skill to effectively test, troubleshoot and service communications hardware.

Fifth Trimester (TECH5).

Television Signals and Signal Circuits: basic television principles.

Television Control, Power Supply, and Audio Circuits: theory and practical aspects of the control, power supply and audio circuits of a TV receiver.

Industrial Controls: measurement principles, transducers, instrumentation amplifiers, motors and generators, and four-layer control devices.

Technician Electronics Laboratory: exercises to demonstrate principles of TV reception, to develop familiarity with TV receivers and TV test equipment and skills in testing, troubleshooting.

APPENDIX B

DATA COLLECTION METHODOLOGY AND RESULTS

Longitudinal studies of low-income populations present a number of special data collection difficulties. The most troublesome issue is respondent attrition: researchers have found that even over a relatively brief follow-up period, a sizable proportion of an original study population is lost. Attrition is primarily due to moves made by respondents to new quarters; often this means moving into another household (that of a relative or friends) which makes location especially difficult. Unlike middle-class movers, low-income movers may not notify the post office of their moves, either because they do not expect to receive mail or because they are seeking to avoid creditors or troublemakers. It is believed by some researchers that respondents are more likely to refuse to participate in a given study when asked to participate to a second, third or fourth round of data collection.

The study of High Quality Training for WIN women sought to deal with these problems through an elaborate address maintenance system described below, and through the use of incentives in connection with the final wave of interviews. Subject retention was considered especially crucial in this study which is based on intensive multiple follow-ups with a relatively small initial number of study subjects. The extent to which we succeeded in retaining the study population through the various data collection waves over four years, and the effects of attrition on the composition of the study population are discussed in this Appendix.

Address Maintenance Procedures

Because the research design called for conducting several interviews over time with the same panel of respondents. A computerized address maintenance system was developed at the outset of the study as a means of keeping track of all study subjects. The features of that system, which permitted continuous tracking of respondents throughout the course of the study, are described below.

As part of the orientation and screening process, each potential study participant was asked to sign a statement indicating her willingness to take part in the evaluation of the training program and to allow some information about her to be released by the WIN offices whether or not she was among the women selected to enroll in the training program. At the same time, the women were asked to provide information which would enable interviewers to locate them during each of the data collection phases. This information included the name, address, and telephone number of the woman herself, and those of a person, designated by the respondent as a "contact person" who would always know her whereabouts. This information was entered into a computer file and used as the basis for all subsequent contacts with study participants and for organizing field activity.

Each respondent was assigned a unique 3-digit identification number to be used throughout the study. To keep address information current, respondents were sent a pre-stamped, pre-addressed post card every three months. The post card showed each participant's name and identification number along with the most recent address and telephone number in our files for that person (see Exhibit B-1). In an accompanying letter (Exhibit B-2), the woman was asked either to verify that the information on the card was still correct, or to make corrections as necessary. When the post card was returned to BSSR, the computer address file either was up-dated with the new information or an entry was made in it to indicate that the participant had verified the existing information. Each responding study participant was then sent a thank-you letter (Exhibit B-3) and an incentive check (explained below).

Incentives were used to maximize participation in the address maintenance system. Each time a woman returned her post card, verified or corrected, she received a $2.00 check. [1] Also, any woman who returned all of her post cards was eligible for a drawing for a color television set (one per site) at the conclusion of the study. Both of these incentives were explained to the women when they first began participating in the study and were mentioned again in subsequent communications.

The content and emphasis of the letter accompanying the verification post card changed somewhat from one phase to the next. For instance, the emphasis in the first and some subsequent letters was on the importance of the study and the participant's role in it; in others, we focused on the incentives; and in still others, primary attention was given to reminding respondents of their agreement at intake to cooperate in all phases of the research. These variations served to minimize repetitiveness and they allowed us to address questions or misunderstanding which arose periodically. However, there were common elements to all of these letters, including instructions for verifying or correcting post card information, and the name of the person and the telephone number to call with questions about the study.

When no response was received from a respondent, or the post card and accompanying letter were returned by the post office as undeliverable, a variety of efforts were made to re-establish contact with the study participant. They included calling the phone number listed, attempting to reach the contact person, asking local directory assistance operators for the telephone number and address of the individual, calling other individuals with the same last name in that city (except for very common last names), contacting Bell & Howell school officials for information, and, finally, contacting local WIN officials.

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1. In fact, any time a woman cooperated in any way in our efforts to verify or correct addresses, she received the $2.00 incentive. That is, if the post office returned the envelope as undeliverable and in a subsequent telephone conversation, the respondent provided the requested information, she would still qualify for the incentive.

EXHIBIT B-1

Please check here if all the information below is correct: ☐

Please cross out any wrong information below and write in the correct information.

000

Respondent's name
Address
Telephone number

EXHIBIT B-2

Bureau of Social Science Research, Inc.
1990 M Street, N.W., Washington, D.C. 20036
(202) 223-4300

4

April 27, 1979

Dear WIN Client:

Once again, we are asking for your help in keeping an up-to-date listing of the women in our study of training and work experiences of women WIN clients. I would like to emphasize that our study includes women who are in the electronics technician training program as well as a group of women who are not in the program. This will allow us to compare the different experiences of women in both groups.

Please check the enclosed post card to be sure that we have your name, address, and telephone number correct. If there are any errors, just cross out what is wrong, and replace it with the correct information. When you have checked the card, please send it back to us as soon as you can.

I would like to remind you that we will send you a check for $2.00 as soon as we receive your post card. Also, at the end of the study, we will pool the names of all the women who have returned all of their cards, and draw one name from that pool. The woman whose name is drawn will win a color television.

If you have any questions about the study that we are doing, please feel free to call me or Miriam Balutis, collect. The telephone number is (202) 223-4300.

Thank you for your help.

Sincerely,

Laure Sharp

Laure Sharp
Project Director

EXHIBIT B-3

Bureau of Social Science Research, Inc.
1990 M Street, N.W., Washington, D.C. 20036
(202) 223-4300

June, 1979

Dear WIN Client,

Thank you very much for returning your post card to us. We greatly appreciate the help that so many of you are giving us by sending in these cards.

As we mentioned in our first letter, you will receive a $2.00 check each time that you return the cards that we send. The check for the most recent return is enclosed.

Again, thank you for your help.

Sincerely,

Laure Sharp

Laure Sharp
Project Director

P.S. I would also like to remind you that at the end of our study, those women who have returned all of their post cards will be eligible for a drawing for a portable color television set.

Interviewing

Interviews for Phase I of this study were conducted between January and March of 1979. The results of this first round of data collection are shown in Table B-1. Overall, interviews were obtained from 90% of the women in the study group. As shown, the rate of completion was greatest among training program participants (100%); the next highest was among program dropouts (92%); and we were the least successful in Phase I in obtaining interviews with members of the comparison group (82%.) For the most part, when we did not complete interviews it was because we could not locate the women during the field period. Despite extensive search measures (described above), eight percent of the cases fell into this "unlocatable" category. Very few members of the study population refused to be interviewed (only two percent) and all of the refusals came from members of the comparison group.

All but four of the Phase I interviews were conducted by BSSR-trained local interviewers (the four exceptions were women interviewed by BSSR staff members) and all were in-person interviews. In all three data collection phases, local supervisors were provided with address information from our address maintenance files. If this proved inaccurate, interviewers and supervisors followed the search procedures described above. In addition, they sought the assistance of neighbors where possible and instituted postal searches for new addresses where appropriate.

The bulk of the Phase II interviewing took place between March and June of 1981, although the actual field period was somewhat longer taking into account pre-test interviewing in late 1980 and early 1981 and "clean-up"interviewing (e.g., finding hard-to-locate respondents, interviewing late dropouts) as late as August, 1981. The overall completion rate was 82% (see Table B-2). During this phase, 14% of the study group were not located, and a few (4%) refused to be interviewed. Graduates (the Training Participants in Phase I) again were more willing to be interviewed (96%) than their dropout and comparison group counterparts, those groups having completion rates of 83% and 77%, respectively.

Nearly all (95%) of the interviews in Phase II were conducted in person by local interviewers trained by BSSR staff at each of the sites. The remaining five percent were telephone interviews conducted by BSSR staff members from Washington, D.C. Those interviewed by telephone in Phase II had moved from Chicago and Columbus.

Phase III data collection began in September, 1982 and was completed by mid-December of the same year. As Table B-3 illustrates, the overall rate of completion declined by this time to 74% owing primarily to the inability of BSSR staff or the interviewers to locate close to one-fourth (23%) of the women in the study. The rate of refusal did not change appreciably by this time (with percentages of 2, 4, and 3 in Phases I, II and III, respectively).

TABLE B-1

PHASE I DATA COLLECTION RESULTS

Site	Training Participants			Drop-outs			Comparison Group Members			TOTAL			Site Total
	Complete	Unable to Locate	Refusal	Complete	Unable to Locate	Refusal	Complete	Unable to Locate	Refusal	Complete	Unable to Locate	Refusal	
Chicago	40	-	-	15	2	-	45	9	7	100	11	7	118
Columbus.	55	-	-	20	1	-	67	9	-	142	10	-	152
Total N	95	-	-	35	3	-	112	18	7	242	21	7	270
(%)	(100)	(-)	(-)	(92)	(8)	(-)	(82)	(13)	(5)	(90)	(8)	(2)	(100)

TABLE B-2

PHASE II DATA COLLECTION RESULTS

Site	Graduates			Drop-outs			Comparison Group Members			TOTAL			Site Total
	Complete	Unable to Locate	Refusal	Complete	Unable to Locate	Refusal	Complete	Unable to Locate	Refusal	Complete	Unable to Locate	Refusal	
Chicago	25	1	1	35	4	-	48	10	-	108	15	1	124
Columbus.	20	-	-	45	8	4	53	14	7	118	22	11	151
TOTAL N	45	1	1	80	12	4	101	24	7	226	37	12	275
(%)	(96)	(2)	(2)	(83)	(13)	(4)	(77)	(18)	(5)	(82)	(14)	(4)	(100)

[a]These numbers have been increased by the addition to the study group of 13 women (7 in Chicago, 6 in Columbus) who were not part of the original study population but who were given the opportunity by WIN to participate in the electronics technician training program after the study began.

[b]These totals do not include eight women (1 in Chicago, 7 in Columbus) who were still enrolled in the training program at the time Phase II data collection activities had ceased.

TABLE B-3

PHASE III DATA COLLECTION RESULTS

Site	Graduates			Drop-outs			Comparison Group Members			TOTAL			Site Total
	Complete	Unable to Locate	Refusal	Complete	Unable to Locate	Refusal	Complete	Unable to Locate	Refusal	Complete	Unable to Locate	Refusal	
Chicago	21	6	-	31	9	-	42	13	3	94	28	3	125
Columbus.	19	5	1	41	15	1	53	16	4	113	36	6	155
Total N	40	11	1	72	24	1	95	29	7	207	64	9	280[a]
(%)	(77)	(21)	(2)	(74)	(25)	(1)	(73)	(22)	(5)	(74)	(23)	(3)	(100)

[a]Does not include three women who were still in the program at the time of the data collection.

Table B-4 summarizes the response breakdowns for all three interviewing periods. In addition to the completion rates illustrated in Figure B-1, this table displays the percentages of respondents who refused to be interviewed and those who could not be located. The data presented in Table B-4 is broken down by site. The major difference between the two sites appears to be in the refusal rate, and the direction of this difference is not consistent across phases. That is, during Phase 1, there was a six percent refusal rate in Chicago, while no one at all refused in Columbus at that time; and there were only a few Chicago refusals in later phases. During these later phases, Chicago interviewers were more successful at securing the cooperation of the women whom they were able to find than were the Columbus interviewers. This difference in refusal rate is more notable in Phase II than in Phase III.

In all phases, it is possible that the category "unable to locate" may include some "veiled" refusals (i.e., where a contact person, told by a study member that she did not want to be interviewed, reported to us simply that she did not know how to reach the respondent). However, when there was any reason to suspect a proxy refusal, the case was classified as a refusal; thus, it is our feeling that there is little cause to believe that undetected veiled refusals occurred to any significant degree.

Finally, an unexpected phenomenon occurred during the last interviewing phase. Thirteen women who were not interviewed in Phase II granted Phase III interviews. Of these, seven had been designated as unlocatable in Phase II -- a designation which inspired little optimism about the likelihood of obtaining Phase III interviews with them. The other six were refusers in Phase II. In the case of the former, the reasons for their new-found accessibility is unclear although we can speculate that they may have moved from and later returned to our "last known address" for them, or they may have reestablished contact with their contact persons. Some of the latter (former refusers) presumably were motivated to be interviewed in Phase III by the financial incentive. It is also possible that improved living conditions or circumstances contributed to their more favorable response.

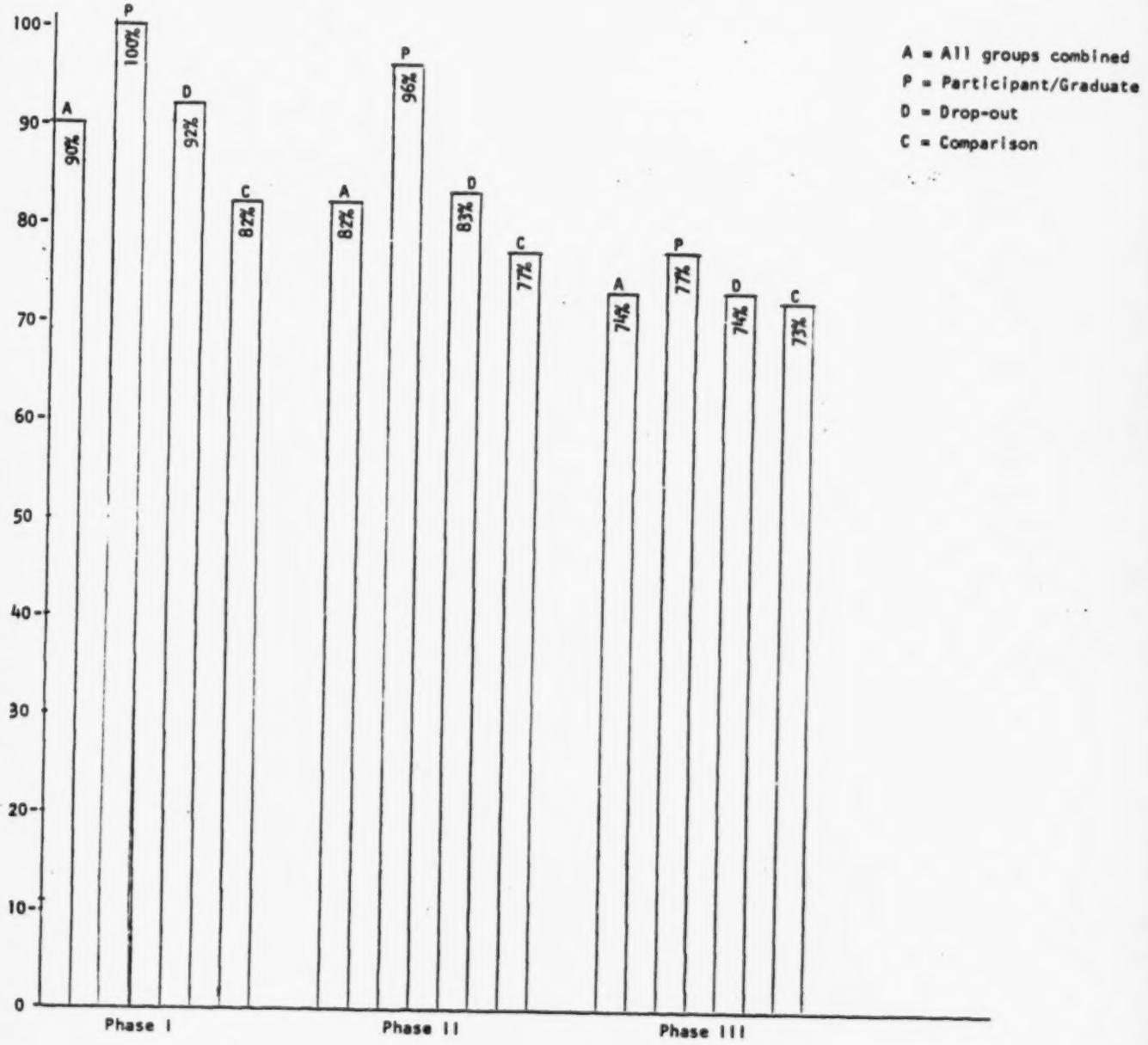
TABLE B-4

RESPONSE RATE FOR ALL PHASES, BY SITE

Result	Site								
	Chicago			Columbus			Both		
	Phase I	Phase II	Phase III	Phase I	Phase II	Phase III	Phase I	Phase II	Phase III
Completion	85%	87%	75%	93%	78%	73%	90%	82%	74%
Unable to locate . .	9	12	22	7	15	23	8	13	23
Refusal.	6	1	2	-	7	4	2	4	3
Total %	100	100	99	100	100	100	100	99	100

FIGURE 8-1

COMPLETION RATE WITHIN GROUPS, ACROSS PHASES



The majority of the Phase III interviews were conducted by telephone, in most instances by local interviewing staffs after completion of BSSR interviewer training and briefing; a few of the interviews were conducted by BSSR staff by telephone from Washington.

Because of the unanticipated lapse in time from Phase I to Phase III, it was expected that we would encounter some difficulty locating respondents in the last phase, particularly dropouts and comparison group members. Furthermore, even if they were to be located, there was some question whether they could be persuaded to participate since the study had begun (and their agreement to be interviewed as part of it had been secured) so long before the Phase III interviewing. The Participants (later Graduates), it was reasoned, would be more familiar with the research by virtue of their on-going association with the training program, and, presumably, would be more willing to be interviewed. Therefore, it was decided to offer a financial incentive ($10.00) to increase the participation rate among the dropouts and comparisons, but no incentive was offered to the graduates. To some degree, the incentive seems to have been justified. While the overall refusal rate was held to three percent, interviewers' impressions are that, without the incentive, the comparison group members, in particular, might not have cooperated to the degree that they did (their refusal rate was 5%). We feel, too, that the refusal rate for dropouts (only 1%) likely would have been higher without the incentive. While the graduate completion rate is lower than in Phases I and II, Table B-3 shows that this is attributable to location difficulties rather than refusals (which remained at 2% for this group). Thus, failure to offer the incentive to the Graduate group does not appear to have had any negative impact on response rate for this group.

The Phase I completion rate pattern established a trend which continued into the two subsequent interviewing phases. As can be seen in Figure B-1, in all three phases, interviews were completed with a greater proportion of participants/graduates than with the comparisons or dropouts, the former having the lowest rate of completion each time. Also, almost without exception, the rate of refusal was lower than the "unable to locate" rate for the non-respondents (not shown in figure).

It is also clear from Figure B-1 that the completion rate for all groups declined from each phase to the next, the most dramatic difference seen in the participant/graduate group from Phase II to Phase III. The most obvious explanation is that the lapse in time allowed many of the respondents to move and, in many cases, lose touch with their contact persons, WIN personnel, counselors, etc., thus making it impossible to locate them using the standard search procedures. In the first phase, these women constituted a "captive audience". That is, nearly all of them enrolled in the training during the field period and most of the interviews in fact took place at the training institution. By the second wave of interviews, many were still enrolled and again were interviewed at the schools. Phase III interviewers, on the other hand, found a much more scattered group, the members of which could be located only with great effort, if at all.

APPENDIX C

GUIDELINES TO WIN STAFF FOR CLIENT SELECTION AND RECORD-KEEPING PROCEDURES FOR THE EXPERIMENTAL WIN/BELL & HOWELL ELECTRONIC TECHNICIAN TRAINING PROGRAM

This is an experimental program funded by the WIN National Office in Washington, D.C., to determine if successful completion of intensive training in a skilled occupation by disadvantaged women will lead to a job providing self-supporting income and independence from the welfare system. From a pool of WIN clients determined to be eligible for the program according to the criteria outlined in the following pages, roughly half will be randomly selected for enrollment in the electronic technician training program at the Bell & Howell School in the city. As part of the research and evaluation component of the program to be conducted by the Bureau of Social Science Research, all clients in the total pool of eligibles (both selected and non-selected) will be followed up periodically over the next two years for the purposes of monitoring their training and employment experiences and assessing the benefits of completing this highly specialized training program as opposed to the more conventional WIN options of direct job placement or shorter-term training.

Criteria for selecting clients have been developed to incorporate the professional judgment of WIN staff and the clients' scores on both the GATB and on screening tests administered routinely to applicants by the Bell & Howell Schools. The following guidelines essentially describe, with a few clarifications, the procedures that were followed for the first round of WIN client selection in Chicago that took place during June. The procedures outlined should be followed in both Columbus and Chicago for the fall selection process. The guidelines are written to be generally applicable,

and hence, specific individuals serving as state and local WIN office program coordinators are not named. These individuals will be identified in subsequent memos.

CLIENT SELECTION PROCEDURES

1. The counselor should refer for testing with the GATB those clients judged most likely to benefit from and to succeed in this program. During the course of the client interview, the counselor should determine the client's interest in nontraditional careers for women, particularly in the areas of electronics, welding, and automobile mechanics (Attachment A contains capsule descriptions of careers in each of these fields). To be eligible for the next stage in the selection procedure, clients must have either:

   a) For a "G" score of at least 90 on the GATB, an interest in any one of the three nontraditional career areas, or

   b) For a "G" score in the 80-89 range, a high school diploma or GED certificate and a specific interest in a career as an electronic technician.

2. Clients who meet the selection criteria should be informed of the following about the Bell & Howell training program:

   a) Electronics training is not a short-term program but the pay-off is a profession that will allow her to get a high paying job which provides self-supporting income and independence from welfare. Training will last at least 18 months and, since most clients will require some preparatory work, the average expectable length of training is 21 months.

b) In addition to the regular course of study and school services, WIN clients will receive additional supportive services to maximize successful completion. These include:

i. Extra counseling services.

ii. Study and career orientation course which will cover such topics as how to study, establishment of career goals, industry speakers, tour of an electronic employer's facility, former female graduate speakers, and presentation of graduate placement arrangements and special student activity association groups.

iii. Tutoring and supplemental instructions to compensate for deficiencies in or difficulties with math and technical subjects; to provide small group instruction in problem areas; to monitor and support individualized remedial instruction; and to give individual help as needed.

iv. Placement on graduation.

v. A preparatory trimester for remedial instruction for those who have potential but are not ready for direct entry into the Electronics Technician program.

c) The training institution will provide an orientation program of approximately three hours duration that will include a film and slides on the electronic field, specifics about the school and its program, a tour of the facility, individual screening and testing, and lunch (Attachment B contains an outline of the orientation session). Clients should be

told that the orientation program includes the administration of two brief reading and arithmetic aptitude tests that are part of the training institution's normal applicant screening procedures, and that further eligibility for selection into the training program is dependent upon obtaining satisfactory scores on at least one of these two screening tests. It should also be made clear to clients that only half of those who attend the orientation session and qualify on aptitude will be selected for enrollment in the program. This selection procedure will be random, so each fully qualified client has a 50-50 chance of being selected. All clients in the total pool of eligibles will be asked to participate in the research designed to evaluate the effectiveness of this high quality training program. For the October enrollment group in Chicago, none of those clients who were in the pool of eligibles for the July enrollment group may be included.

3. Interested clients should then be scheduled for an orientation session and given the arithmetic review booklet developed by Bell & Howell Schools to assist applicants in their preparations for the screening test.

4. The names of clients who meet the Bell & Howell Schools' admissions requirements will be sent to the Bureau of Social Science Research in Washington, D.C., so that random procedures can be used to select program enrollees.

5. All selected clients should be informed as soon as their names are returned to the local WIN office. Requests for day care arrangements should be made to SAU as needed. In the event that any selected clients

decide not to enroll, the state WIN program coordinator should be informed immediately and, if at all possible, given the client's reasons for non-participation. Only a strictly limited number of substitutions will be made.

6. Any selected clients who drop out of the electronic technician training program will be eligible for regular WIN services.

RECORD-KEEPING

In order to keep as close tabs as possible on the recruitment and selection process, the following information should be forwarded to the program representative in the state WIN office on a weekly basis:

a) Total number of clients counseled on nontraditional careers;

b) Of those counseled, the number interested or not interested in nontraditional careers;

c) Number of all referred to GATB testing;

d) Number and scores of all clients who actually took the GATB;

e) Lists of those who declined to participate after the Bell & Howell orientation session. These names, in addition to being listed on the weekly report, should be phoned in daily to the state WIN program coordinator.

ATTACHMENT A

ENGINEERING AND SCIENCE TECHNICIANS

(D.O.T. 002. through 029.)

Nature of the Work

Knowledge of science, mathematics, industrial machinery, and technical processes enables engineering and science technicians to work in all phases of business and government, from research and design to manufacturing, sales, and customer service. Although their jobs are more limited in scope and more practically oriented than those of engineers or scientists, technicians often apply the theoretical knowledge developed by engineers and scientists to actual situations. Technicians frequently use complex electronic and mechanical instruments, experimental laboratory equipment, and drafting instruments. Almost all technicians described in this statement must be able to use technical handbooks and computing devices such as slide rules and calculating machines. In research and development, one of the largest areas of employment, technicians set up experiments and calculate the results using complex instruments. They also assist engineers and scientists in developing experimental equipment and models by making drawings and sketches and frequently, by doing routine design work.

In production technicians usually follow the plans and general directions of engineers and scientists, but often without close supervision. They may prepare specifications for materials, devise tests to insure product quality, or study ways to improve the efficiency of an operation. They often supervise production workers to make sure they follow prescribed plans and procedures. As a product is built, technicians check to see that specifications are followed, keep engineers and scientists informed as to progress, and investigate production problems.

As sales workers or field representatives for manufacturers, technicians give advice on installation and maintenance of complex machinery, and may write specifications and technical manuals. (See statement on technical writers elsewhere in the Handbook.) Technicians may work in the fields of engineering, physical science, or life science. Within these general fields, job titles may describe the level (biological aide or biological technician), duties (quality control technician or time study analyst), or area of work (mechanical, electrical, or chemical).

As an engineering technician, one might work in any of the following areas: Electronics Technology. Technicians in this field operate, maintain and install electronic equipment and systems. The types of equipment range from radio, radar, sonar, and television to industrial and medical measuring or control devices, navigational equipment, and electronic computers. Because the field is so broad, technicians often specialize in one area such as automatic control devices or electronic amplifiers. Furthermore, technological advancement is constantly opening up new areas of work. For example, the development of printed circuits stimulated the growth of miniaturized electronic systems.

When working in production, or customer service, electronic technicians use sophisticated measuring and diagnostic devices to test, adjust, and repair equipment. In many cases, they must understand the requirements of the field in which the electronic device is being used. Some electronics technicians also work in technical sales, while others work in the radio and television broadcasting industry. (See statements on broadcast technicians and occupations in radio and television broadcasting elsewhere in the Handbook).

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OCCUPATIONS IN THE ELECTRONICS INDUSTRY

An astronaut, a doctor, a mechanic, and a business executive all have something in common: without electronic devices they would be unable to do much of their work. We would never have reached the moon without the thousands of people working in electronics research and production. Nor would doctors be able to diagnose and treat many diseases without modern electronic machines. Mechanics use electronic testing equipment to locate malfunctioning parts in numerous types of machines and engines. Business executives also owe a lot to electronics. Electronic computers, for example, provide them with better and more information, speed up payroll and building procedures, and reduce the cost of their operations.

Nature and Location of the Industry

The electronics industry dates back to the early 1900's when the first radios were produced. By 1930, the industry had expanded its research to include, for example, the development of crude television pictures in color. It wasn't until World War II, however, that electronics production really began to diversify. Efforts to develop a wide range of military products resulted in scientific advances such as electronic measuring and detecting equipment, air flight control equipment, and the digital computer. Today, the industry produces about 30,000 types of electronic goods.

The electronics industry is divided into four main market areas: government products, industrial products, consumer products, and components. Products sold to the government make up a large portion of electronic sales and include widely different items such as missile and space guidance systems, communications systems, and other electronic goods used in medicine, education, crime detection, and traffic control. Industrial purchases include computers, radio and television broadcasting equipment, telecommunications equipment, electronic office equipment, and production control equipment—all vital to daily business operations.

Consumer products are probably the most familiar types of electronic products. Every day thousands of people buy television sets, radios, stereos, and calculators. No electronic products could be developed, however, without their main ingredient—components. Some of the most well-known components are capacitors, switches, transistors, relays, television picture tubes, and amplifiers.

About 1.4 million persons were employed in the development, production, and sales of these products in 1976. Nearly three-quarters of them worked in plants that produce end products for government, industrial, and consumer use. The rest worked in plants that made electronic components.

Electronics manufacturing workers are located in all parts of the country, but the majority of the jobs in 1976 were in eight States: California, New York, Illinois, Massachusetts, Pennsylvania, Indiana, New Jersey, and Texas. Metropolitan areas with large numbers of electronics manufacturing workers include Los Angeles, Chicago, New York, Philadelphia, Newark, Boston, Baltimore, Indianapolis, and Dallas.

Most electronics products are assembled by hand with small tools, soldering irons, and light welding machines.

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WELDERS

(D.O.T. 810. through 819.887)

Nature of the Work

Welding consists of joining pieces of material, usually metal, by fusing or bonding them together. It is the most common method of permanently connecting metal parts that go into the construction of automobiles, spacecraft, ships, household appliances, construction equipment, and thousands of other products. Beams and steel reinforcing rods in bridges, buildings, and roads frequently are joined by welding. In addition, a growing number of plastic parts are welded to make a variety of products.

Welding processes differ in the way heat is created and applied to the parts being joined. In arc welding, the most frequently used process, heat is created as electricity flows across a gap from the tip of the welding electrode to the metal. In resistance welding, heat is created by resistance to the flow of current through the metal. In gas welding, the combustion of burning gases melts the metal. As part of many welding processes, filler materials, called welding electrodes or welding rods, are melted and added to the joint to give it greater strength. When the heat is removed, the metal and filler material solidify and join the parts. It is the welder's job to control the heat and the weld pool size and to add the filler material so that together they form a strong joint.

Since welding processes differ and are used for a wide variety of purposes, the equipment used and the skill levels of welders vary. Jobs vary from those of highly skilled manual welders who can use gas and electric arc welding equipment in more than one position and who can plan their work from drawings or other specifications to those of unskilled welding machine tenders who simply press a button to start the welding machine. Skilled welders know the material characteristics and properties of steel, aluminum, and other metals and can weld joints in all positions. For example, maintenance welders, pipe welders, and many of the welders who construct ships are skilled welders.

Ship welders join the steel plates, beams, and pipes used to build ships. Some welded joints are on the floor, some are on the wall, and some are overhead. All must be carefully welded to insure that the ship will not break apart in rough seas.

Ship welders generally use arc welding equipment, although gas equipment also is used in many areas. After reading instructions or specifications to learn which materials and welding method to use and obtaining supplies from the storage area, ship welders are ready to begin work. When employing shielded metal arc welding they use a rod in a holder attached to an electric cable coming from a welding power supply. The other power supply cable is attached to the metal being welded which completes the electrical circuit and controls are adjusted to provide the correct amount of welding current. When the power is turned on they "strike an arc" by briefly touching the rod to the metal to start the electricity flowing and then pulling the rod back to create a small gap which the current must jump. If the distance between the rod and the metal is correct, an arc will jump across the space; the heat from the electric arc melts the rod and the metal. Welders control the arc movement along the joint. As the rod melts and becomes shorter they move the holder closer to the metal to keep the correct arc length. When the rod becomes very short, it is discarded and replaced with a new one.

Maintenance welders repair tools, machines, and equipment—for example, a leaking pipe. In such cases, welders may bring their equipment to the job. Gas welding is used in many cases because electrical power may not be available and the torch, hoses, and tanks of gas are portable.

After examining the pipe and preparing the break for repair—usually by grinding—maintenance welders select the proper welding filler rod for the job. Next, they light the torch and adjust regulators on the tanks of fuel gas, such as acetylene, hydrogen, etc., and oxygen to obtain the right gas mixtures and flame. With the filler rod in one hand and the torch in the other, they heat the edges of the break and apply the heat. As the metal begins to melt, the welders periodically melt the end of the filler rod in the hot, liquid metal while they carefully move the torch and rod along the crack to complete the repair. Welders must be careful to keep the torch at the right distance from the metal in order to apply the heat correctly and to add filler material, as needed, to fill the crack.

Not all welders have the skills required of shipbuilding or maintenance welders. For example, less skilled workers use semiautomatic arc welding equipment to speed up the job of welding automobile frames. Semiautomatic equipment consists of a welding gun that welders must manipulate but which automatically supplies the proper amount of arc heat and filler material to the joint. In this case, assembly lines bring car frames to welders and put them in place. Welders then position their welding guns on the parts to be welded and operate a switch on the handle which automatically "strikes an arc". They guide the arc to complete one or two joints before the assembly line takes the frame to another worker. Like other welders, they are responsible for the soundness of the joint. However, they need less skill because all parts they weld are identical and each is welded in the same position.

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AUTOMOBILE MECHANICS

(D.O.T. 620.131 through .381, .782, and .885; 721.281 and 825.281)

Nature of the Work

Anyone whose car has broken down knows how important the automobile mechanic's job is. The ability to make a quick and accurate diagnosis is one of the mechanic's most valuable skills. It requires good reasoning ability as well as a thorough knowledge of automobiles. In fact, many mechanics consider diagnosing "hard to find" troubles one of their most challenging and satisfying duties.

When mechanical or electrical troubles occur, mechanics first get a description of the symptoms from the owner or, if they work in a dealership, the service advisor who wrote the repair order. If the cause of the trouble is hard to find, the mechanic may test drive the car or use testing equipment, such as motor analyzers, spark plug testers, or compression gauges, to locate the problem. Once the cause of the problem is found, mechanics make adjustments or repairs. If a part cannot be fixed, they replace it.

Most automobile mechanics perform a variety of repairs; others specialize. For example, *automatic transmission specialists* work on gear trains, couplings, hydraulic pumps, and other parts of automatic transmissions. Because these are complex mechanisms, their repair requires considerable experience and training, including a knowledge of hydraulics. *Tune-up mechanics* adjust the ignition timing and valves, and adjust or replace spark plugs, distributor points, and other parts to ensure efficient engine performance. They often use scientific test equipment to locate malfunctions in fuel and ignition systems.

Automobile air-conditioning specialists install air-conditioners and service components such as compressors and condensers. *Front-end mechanics* align and balance wheels and repair steering mechanisms and suspension systems. They frequently use special alignment equipment and wheel-balancing machines. *Brake mechanics* adjust brakes, replace brake linings, repair hydraulic cylinders, and make other repairs on brake systems. Some mechanics specialize in both brake and front-end work.

Automobile-radiator mechanics clean radiators with caustic solutions, locate and solder leaks, and install new radiator cores. They also may repair heaters and air-conditioners, and solder leaks in gasoline tanks. *Automobile-glass mechanics* replace broken windshield and window glass and repair window operating mechanisms. They install preformed glass to replace curved windows, and they use window patterns and glass-cutting tools to cut replacement glass from flat sheets. In some cases they may repair minor damage, such as pits, rather than replace the window.

To prevent breakdowns, most car owners have their cars checked regularly and parts adjusted, repaired, or replaced before they go bad. This responsibility of the mechanic is vital to safe and trouble-free driving. When doing preventive maintenance, mechanics may follow a checklist to be sure they examine all important parts. The list may include distributor points, spark plugs, carburetor, wheel balance, and other potentially troublesome items.

Places of Employment

Over 700,000 persons worked as automobile mechanics in 1976. Most worked for automobile dealers, automobile repair shops, and gasoline service stations. Others were employed by Federal, State, and local governments, taxicab and automobile leasing companies, and other organizations that repair their own automobiles. Some mechanics also were employed by automobile manufacturers to make final adjustments and repairs at the end of the assembly line. A small number of mechanics worked for department stores that have automobile service facilities.

Most automobile mechanics work in shops that employ from one to five mechanics, but some of the largest shops employ more than 100. Generally, automobile dealer shops employ more mechanics than independent shops.

Automobile mechanics work in every section of the country. Geographically, employment is distributed about the same as population.

Training, Other Qualifications, and Advancement

Most automobile mechanics learn the trade on the job. Beginners usually start as helpers, lubrication workers, or gasoline station attendants, and gradually acquire skills by working with experienced mechanics. Although a beginner can make simple repairs after a few months' experience, it usually takes 3 to 4 years to become familiar with all types of repairs. An additional year or two is necessary to learn a difficult specialty, such as automatic transmission repair. In contrast, radiator mechanics, glass mechanics, and brake specialists, who do not need an all-round knowledge of automobile repair, may learn their jobs in about 2 years.

Most training authorities recommend a 3- or 4-year formal apprenticeship program. These programs include both on-the-job training and classroom instruction. On-the-job training includes instruction in basic service procedures, such as engine tune-up, as well as instruction in special procedures such as overhauling transmissions. Classroom instruction includes courses in related theory such as mathematics and physics and other areas such as shop safety practices and customer relations.

For entry jobs, employers look for young persons with mechanical aptitude and a knowledge of automobiles. Generally, a driver's license is required as mechanics occasionally have to test drive or deliver cars. Working on cars in the Armed Forces or as a hobby is valuable experience. Completion of high school is an advantage in obtaining an entry job because to most employers it indicates that a young person has at least some of the traits of a good worker, such as perseverance and the ability to learn, and has potential for advancement. Courses in automobile repair offered by many high schools, vocational schools, and private trade schools also are helpful. In particular, courses in physical science and mathematics can help a person better understand how an automobile operates.

The usual practice is for mechanics to buy their handtools and beginners are expected to accumulate tools as they gain experience. Many experienced mechanics have several hundred dollars invested in tools. Employers furnish power tools, engine analyzers, and other test equipment.

Employers sometimes send experienced mechanics to factory training centers to learn to repair new models or to receive special training in subjects such as automatic transmission or air-conditioning repair. Manufacturers also send representatives to local shops to conduct short training sessions. Promising beginners may be selected by automobile dealers to attend factory-sponsored mechanic training programs.

Experienced mechanics who have leadership ability may advance to shop supervisor or service manager. Mechanics who like to work with customers may become service advisors. Many mechanics open their own repair shops or gasoline service stations and about 1 out of 7 automobile mechanics is self-employed.

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identical parts are to be welded, the company may save money by using automatic welding machines. Such machines may be used, for example, in making automobile mufflers and washing machines. The workers who operate these machines need little knowledge of welding and are frequently called welding machine operators to distinguish them from more skilled, manual welders. Welding machine operators place the parts to be joined in holders on the machine. To complete the weld, operators simply push a button. The machine then clamps the part in place and rotates it, as necessary, to complete the welding cycle. After the welding cycle is finished, operators remove the welded parts and load the machine again.

Jobs for welders are concentrated in the manufacturing centers of the West Lakes States.

Closely related to welders are cutters. Cutters use the heat from burning gases or an electric arc to cut and trim metal rather then join it. Some cutters operate electrically or mechanically controlled machines that automatically follow the proper guideline.

Places of Employment

About 660,000 welders and flame cutters were employed in 1976, including a relatively small number of cutters who used both flame and arc-cutting equipment. Almost two-thirds of all welders help manufacture durable goods; for example, boilers, bulldozers, trucks, ships, and heavy machinery. Most of the rest repair metal products or help construct bridges, large buildings, and pipelines.

Welders are concentrated in the manufacturing centers of the Great Lakes States. About one-third work in Pennsylvania, Ohio, Michigan, Indiana, and Illinois. Because of the widespread use of welding, the rest are distributed much the same as the population is with large numbers working in New York, Texas, Wisconsin, and California.

Training, Other Qualifications, and Advancement

Generally, it takes several years of training to become a skilled welder. Some of the less skilled jobs, however, can be learned on the job in a few months. Some welding machine operators, for example, learn to operate a machine in a few hours and become completely qualified in a week.

Beginners often start in simple production jobs where the type and thickness of the metal and the position of the welding operation rarely change. As the need arises, supervisors or experienced workers teach new employees how to weld different types of materials in [illegible] tical and overhead joints. Many large companies conduct programs to train people as welders. After completing the course, individuals are offered jobs. A few companies offer employees welder apprenticeship programs that last several years, including classroom and on-the-job training.

Persons planning careers as welders or cutters need manual dexterity, good eyesight, and good eye-hand coordination. They should be able to concentrate on detailed work for long periods, and should be free of any physical disabilities that would prevent them from bending, stooping, and working in awkward positions. Most employers prefer applicants who have high school or vocational school training in welding. Courses in shop mathematics, mechanical drawing, blueprint reading, physics, and chemistry also are helpful.

New developments are requiring new skills of welders. This is particularly true in fields such as atomic energy or aerospace manufacturing, which have high standards for the reliability of welds. Before being assigned to work on buildings, bridges, pipelines, or other jobs where the strength of the weld is highly critical, welders may be required to pass an examination of their welding skills given by an employer or government agency. Welders who pass such examinations generally are referred to as "certified welders."

Promotion opportunities for welders are good. Some welding machine operators learn skilled welding jobs; skilled welders may be promoted to welding inspectors, technicians, or supervisors. Experienced workers who have obtained college training on the properties of metals often become welding engineers and are in great demand to develop new application for welding. A small number of experienced welders open their own welding repair shops.

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ATTACHMENT B

SCREENING AND ORIENTATION
DOL/WIN PROJECT
Total Time 2 Hrs. 45 Min. (Approximately)

I. Assembly and Introduction (10 minutes)

R. P. Lindland - Academic Dean
G. A. Murphy - Dean of Students

II. Short Introduction and showing of Bell & Howell Education Group film (15 minutes).

III. Orientation and slide presentation (20 minutes)

1. Review of admission standards and accreditation.
2. Admission procedures.
   A. Explanation of entry level program.
3. Explanation of testing and placement.
   A. Give particulars of WIN Project - how the students got to this point, where we go from here.
4. Review of academic policies and standards.
   A. Class schedules.
   B. Grading and academic standing.
   C. Attendance.
5. Review of Student Services.
   A. Counseling services.
   B. Housing and Employment.
   C. Student activities and programs.
   D. Professional development programs i.e., I.E.E.E., Women's Organization.
6. Graduate Placement
   A. Latest Graduate Placement Newsletter.
   B. How placement works.
7. General discussion and questions.

IV. Tour of facility and equipment (15 minutes).

1. Include display area of texts and students' projects in Technician Program.

V. Individual screening and interviews (45 minutes).

1. Approximately 10 minute interviews.
2. Admissions flip charts available for reference.
3. Suggested list of questions and rating attached.
4. Suggested Interviewers:

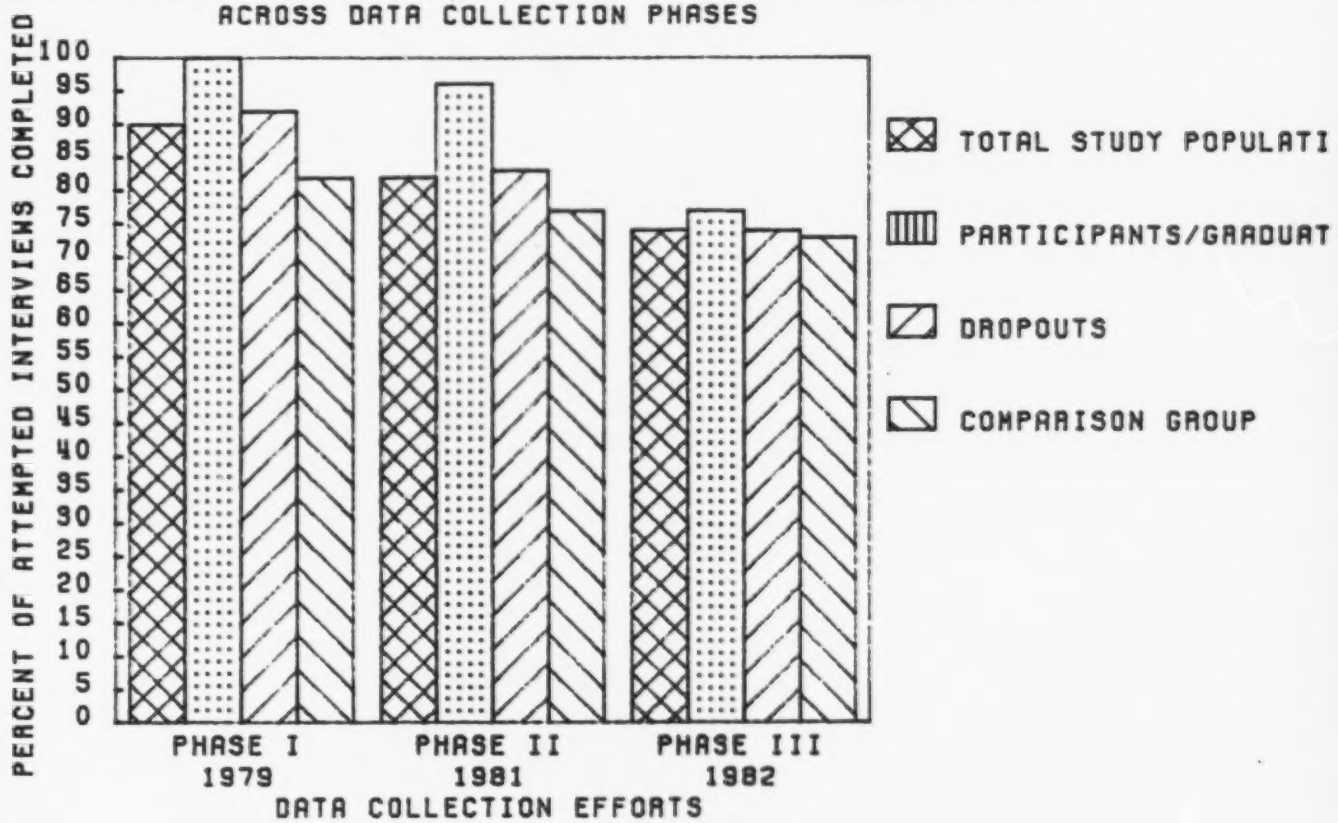
B. Donoghue
J. Dill
R. Lindland
G. Murphy
W. Weaver

VI. Testing - Faculty Lounge - (60 minutes)

1. Basic Arithmetic - 30 to 45 minutes.
2. Reading Test - 30 minutes.

VII. Lunch with tour guide, Lindland and Murphy (open time).

INTERVIEW COMPLETION RATE WITHIN CATEGORIES OF PARTICIPANTS ACROSS DATA COLLECTION PHASES



APPENDIX D

AN ESTIMATE OF THE POOL OF WIN CLIENTS ELIGIBLE FOR HIGH QUALITY NONTRADITIONAL TRAINING

With respect to assessing the feasibility of adopting a high quality training component in the regular WIN program, we felt that it would be helpful for policy makers to have some estimate of the total proportion of WIN clients who have the necessary academic qualifications to become eligible for participation and who would be interested in making a commitment to this type of training. Although we have attempted to collect the relevant data for this analysis since the beginning of the project; this has been a very difficult task for the following reasons:

1. An unknown quantity is the potential pool of voluntary clients. We know from earlier BSSR work with WIN vouchers, that the availability of attractive training options results in the enrollment of substantial numbers of well qualified volunteers. [1] This has been confirmed again in Columbus in connection with the high-quality electronics training program.

2. WIN offices follow widely varying practices with respect to their "backlog" of mandatory clients. Most of the information we have been able to gather about interested and eligible clients is limited to "new intake."

3. The availability of other training opportunities at the time of the study, including those then available under CETA, reduced the number of persons who sought to establish eligibility for the Bell & Howell program, either because counselors had already made other arrangements for some clients, or because the clients had already become committed to another type of training. Therefore, we have reason to believe that the figures shown in Table D-1 represent an understatement, especially for Chicago where only a limited effort was made to publicize the program. As shown in this table, which summarizes the statistics which were furnished by the two WIN offices:

1. Only between 10 and 15 percent of mandatory clients seek training, although this low number may reflect WIN emphasis on placement rather than the free expression of client preference; and

2. Under "outreach" conditions, the proportion of voluntary clients seeking training is considerably higher, perhaps on the order of 20 to 25 percent.

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1. Richardson, Ann, 1977. Vouchered Skill Training in WIN: Program Guidelines and Selected Empirical Findings. Washington, D.C.: Bureau of Social Science Research.

TABLE D-1

INTAKE AND INTEREST IN TRAINING, SEPTEMBER 1978, CHICAGO AND COLUMBUS

	Chicago		Columbus	
	(N)	%	(N)	%
Total WIN intake September 1978	(1,570)	100	(4,395)	100
Mandatory	(1,256)	80	(879)	20
Voluntary	(314)	20	(3,516)	80
Participants seeking training	(240)	15	(959)	22
Mandatory	(192)	15	(192)	10
Voluntary	(48)	15	(767)	22
Number of clients from earlier months' intake seeking training	NA		(101)	100
Mandatory	NA		(21)	21
Voluntary	NA		(80)	79

Tables D-2 and D-3 summarize the results of the selection process for the electronics technician program. It should be noted that information for voluntary vs. mandatory clients is not available for Chicago. The information is also somewhat unclear with respect to the number of clients tested by WIN. For example, some WIN clients were apparently tested even though they were not interested in the Bell & Howell program because some Chicago offices test all new registrants as part of the intake process. Overall, however, the data suggest the following:

1. In Chicago, over half of the clients (most of them mandatory) who participated in counseling sessions about the Bell & Howell program were interested in high-quality training for nontraditional occupations. In Columbus, the number was much lower (24%) among both mandatory and voluntary clients. Conceivably, the explanation lies in the greater availability of training alternatives that existed at that time in Columbus.

2. Interested clients were more likely to receive passing GATB scores in Columbus than in Chicago. Similarly, in Columbus, those with passing GATB scores were more likely to pass the Bell & Howell entrance test.

3. The result is that, in both sites, roughly the same proportion of clients who expressed an interest in the high-quality training program qualified for acceptance into the program. This proportion was 16 percent in Columbus and 19 percent in Chicago. However, the Chicago figures vary sharply from July to October, with only 5 percent of the July, but 33 percent of October candidates qualifying for admission. These results suggest that screening in October was more selective, since only half as many WIN clients participated in the "counseling on nontraditional careers" in October as was the case in July.

What can we conclude from these data about the potential pool of WIN clients for high-quality training for nontraditional occupations? In the first place, a high proportion of clients (76% of those counseled in Columbus; 44% in Chicago), who may or may not have the necessary academic qualifications, had no interest in a program of this type. The nontraditional nature of the program, the length of the training period, and the assumed difficulty of the study course have all been mentioned locally as possible reasons why clients did not wish to be considered for such training.

Of those clients who were interested in this type of training, sixty-six percent in Columbus (154 of 232) and thirty-three percent in Chicago (122 of 366) actually met the entrance requirements stipulated by the training institution. Voluntary clients were no more likely to qualify than mandatory participants. Since these figures are based on a four-month intake period, we would estimate that over the course of a year, two to three times these numbers of qualified WIN clients could be identified. Hence there indeed exists a pool of interested and academically qualified WIN clients who would be eligible for high-quality training.

TABLE D-2

ENROLLMENT IN HIGH-QUALITY TRAINING:
ATTRITION POINTS - COLUMBUS[a]

	Mandatory (N)	Mandatory %	Voluntary (N)	Voluntary %	Total (N)	Total %
Total number of clients counseled on nontraditional careers	(192)	100	(767)	100	(959)	100
Of those counseled, the number interested	(47)	24	(185)	24	(232)	24
Number referred to WIN for testing[b]	(76)	40	(303)	40	(379)	40
Number actually tested	(47)	24	(185)	24	(232)	24
Number who received scores which qualified them for referral to Bell & Howell	(35)	18	(140)	18	(175)	18
Number actually tested by Bell & Howell	(33)	17	(131)	17	(164)	17
Number who qualified for Bell & Howell	(31)	16	(123)	16	(154)	16
Number enrolled in Bell & Howell program	(16)	8	(60)	8	(76)	8

[a]All percents based on "total number of clients counseled on nontraditional careers."

[b]This figure includes data from counselors who send all clients for testing whether they expressed an interest or not.

TABLE D-3

ENROLLMENT IN HIGH-QUALITY TRAINING:
ATTRITION POINTS - CHICAGO[a]

	June - July Intake (N)	%	Sept - Oct Intake (N)	%	Total Intake (N)	%
Total number of clients counseled on nontraditional careers	(440)	100	(215)	100	(655)	100
Of those counseled, the number interested.	(241)	55	(125)	58	(366)	56
Number referred to WIN for testing[b].	(293)	67	(98)	46	(391)	60
Number actually tested.	(263)	60	(98)	46	(361)	55
Number who received scores which qualified them for referral to Bell & Howell	(118)	27	(112)	52	(230)	35
Number actually tested by Bell & Howell	(82)	19	(98)	46	(180)	27
Number who qualified for Bell & Howell admission.	(52)	12	(70)	33	(122)	19
Number enrolled in Bell & Howell program	(24)	5	(37)	17	(61)	9

[a]All percents based on "total number of clients counseled on nontraditional careers."

[b]This figure includes data from regional offices which routinely test all new registrants.

APPENDIX E

CHARACTERISTICS OF PARTICIPANTS AND COMPARISON GROUP

As part of the data analysis for this report, differences between the participant and comparison groups were examined to determine whether our selection procedures resulted in satisfactorily matched groups. Because of the side differences between the Chicago and Columbus populations, it is also necessary to take these differences into account when making comparisons. Such comparisons have been made for every variable mentioned in this report. Chi square tests of statistical significance were used and a .05 probability level was adopted as the criterion for significant differences. According to this standard, there are few variables on which the participant and comparison groups within each site differ significantly, suggesting that the selection procedures adopted for this study were effective in producing matched groups.

Among the demographic variables, differences between the participant and comparison groups were found only in the years of schooling completed and the type of high school program. The distribution of years of education completed by the comparison group members is more concentrated in the completed high school category in both sites as shown in Table E-1. However, while the participant groups contain more members who have completed more than a high school education, they also contain more members who have not completed high school. It is interesting to note that the average number of years completed is nearly identical across all groups, and that while the participant group averages slightly more years completed in Chicago, it averages slightly fewer in Columbus. Thus, it would seem that the differences in the years of schooling completed do not clearly favor the participant group.

The participant group members in Chicago are more likely to have taken a general or academic high school program than the Chicago Comparison group. Given the difficulty of the training offered by Bell & Howell, it is likely that these students have an advantage over those who took part in vocational programs, and since assignment to such programs is often based upon previous academic records, it is likely that this is an indicator of previous school performance (Table E-2).

The participant and comparison groups also differ on some aspects of their employment and job training histories. While the occupational category of the job held for the longest period of time did not differ, the length of time this job was held did (Table E-3). Participant group members in Chicago held this job for a shorter period of time than did comparison group members, while in Columbus the participant group members held this job for a longer time. There are also differences in the reasons given for leaving this job, with the participant group members being more likely to report that health and pregnancy were problems in continuing employment (Table E-4).

Immediately before the time this training program began there were differences in the types of jobs held by participant and comparison group members, with the comparison group members more concentrated in lower skill occupational categories (Table E-5).

Members of both the participant and comparison groups had taken part in previous training programs in an attempt to upgrade their skills. The Chicago participant group is significantly more likely than the Chicago comparison group to have taken part in such a program and to have completed it. In Columbus there is no significant difference between the groups (Table E-6).

Finally, there are differences between the Columbus participant and comparison groups on two of the items of the Rosenberg Self-Esteem Scale. The participant group in Columbus was more likely to disagree with the statements "I certainly feel useless at times" and "I wish I could have more respect for myself" (Table E-7), suggesting higher self-esteem among the participant group members than among comparison group members.

Differences between the participant and comparison groups within sites were examined on a wide range of other variables discussed in this report and no other statistically significant differences were found. Although there are significant differences on a few of the variables discussed, the direction of the differences in terms of the characteristics presumed to be important for success in a training program varies (e.g., participants having slightly more schooling but less employment experience than comparisons), suggesting that the selection process was not biased in favor of assigning the most highly qualified clients to the training program. There is enough variation among participant and comparison group members on characteristics of importance for a thorough evaluation of the demonstration program's impact on such outcomes as employment and welfare dependence.

TABLE E-1

YEARS OF SCHOOLING COMPLETED BY PARTICIPANT/COMPARISON GROUP STATUS AND BY SITE

	Chicago		Columbus	
	Participant	Comparison	Participant	Comparison
Percent Who Completed:				
Less than high school.	44	40	46	30
High school.	33	51	42	69
More than high school.	24	9	12	1[a]
Mean number of years completed	11.8	11.5	11.3	11.5
Standard deviation	1.6	1.3	1.3	0.9
(Table N)	(55)	(45)	(74)	(67)
(Missing Data)	(2)	(16)	(2)	(9)
(TOTAL N)	(57)	(61)	(76)	(76)

[a]Chi-Square=12.6; p=.001.

TABLE E-2

TYPE OF HIGH SCHOOL PROGRAM BY PARTICIPANT/COMPARISON GROUP STATUS AND BY SITE
(In Percentages)

Type of High School Program	Chicago		Columbus	
	Participant	Comparison	Participant	Comparison
General	78	57	65	68
Academic	7	2	14	15
Vocational	15	41[a]	21	17
(Table N)	(55)	(44)	(71)	(66)
(Missing Data)	(2)	(17)	(5)	(10)
(TOTAL N)	(57)	(61)	(76)	(76)

[a]Chi-Square=0.3; p=.009.

TABLE E-3

LENGTH OF TIME AT LONGEST JOB BY PARTICIPANT/COMPARISON GROUP STATUS AND BY SITE
(In Percentages)

	Chicago		Columbus	
	Participant	Comparison	Participant	Comparison
1 - 6 months	16	17	5	29
7 - 12 months	16	0	19	13
13 - 18 months	7	7	14	9
19 - 24 months	13	3	15	7
25 - 36 months	4	21	22	16
37 - 48 months	20	34	7	9
49 - 60 months	7	0	5	4
More than 61 months	18	17[a]	14	13[b]
(Table N)	(45)	(29)	(59)	(55)

[a]Chi-Square=14; p=.05.

[b]Chi-Square=13; p=.05.

TABLE E-4

REASONS FOR LEAVING LONGEST JOB BY PARTICIPANT/COMPARISON GROUP STATUS AND BY SITE[a]
(In Percentages)

	Chicago		Columbus	
	Participant	Comparison	Participant	Comparison
Quit - pregnant	51	10	38	18
Quit - daycare	35	24	11	18
Quit - health	30	17	26	2
Quit - transportation	17	7	11	16
Quit - respondent moved	4	7	13	12
Quit - company moved, folded	6	17	2	5
Laid off	6	14	5	2
Quit - low pay	2	3	10	11
Job was temporary	11	3	5	5
Quit - didn't like job	0	7	3	11
Fired	0	7	7	5
Quit - dispute with boss, workers	4	3	7	4
Quit - poor working conditions	2	0	0	5
Quit - other reasons	19	10	18	21
Other reasons	2	14[b]	8	12[c]
(Table N)	(47)	(29)	(61)	(56)

[a]Figures include those mentioning each reason as the main reason for leaving the job without prompting plus those additional persons mentioning each person with prompting. The percentages total to more than 100 due to multiple responses.

[b]Chi-Square=27.7; p=.02.

[c]Chi-Square=26; p=.03.

TABLE E-5

OCCUPATIONAL CATEGORY OF JOB TITLE FOR JOB HELD IN THE YEAR PRIOR TO ENTERING THE BELL & HOWELL TRAINING PROGRAM BY PARTICIPANT/COMPARISON GROUP STATUS AND BY SITE
(In Percentages)

	Chicago		Columbus	
	Participant	Comparison	Participant	Comparison
Professional	0	0	0	0
Sub-professional and Technical	0	13	0	13
Managerial, Administrative and Proprietary	0	0	6	0
High Clerical	8	0	19	0
Low Clerical	31	0	11	0
Foreman, Craftsman and Kindred	0	0	3	0
Operative and Kindred	23	6	6	9
Service Workers	39	81[a]	56	78[b]
(Table N)	(13)	(16)	(36)	(23)

[a]Chi-Square=11.3; p=.02.

[b]Chi-Square=15; p=.02.

TABLE E-6

PARTICIPATION IN PRE-WIN TRAINING BY PARTICIPANT/COMPARISON GROUP STATUS AND BY SITE
(In Percentages)

	Chicago		Columbus	
	Participant	Comparison	Participant	Comparison
Did you participate in training before entering WIN?				
Yes	40	18	48	45
No	60	82[a]	52	55
(Table N)	(55)	(45)	(75)	(66)
Did you finish the training program?				
Yes	59	13	56	46
No	41	87[b]	44	54
(Table N)	(22)	(8)	(36)	(30)

[a] Chi-Square=4.8; p=.03.

[b] Chi-Square=3.4; p=.05.

TABLE E-7

SCORES ON SELF-ESTEEM MEASURES BY PARTICIPANT/COMPARISON GROUP STATUS AND BY SITE
(In Percentages)

	Group Status	Chicago					Columbus				
		Strongly Disagree	Dis-agree	Agree	Strongly Agree	TOTAL % (N)	Strongly Disagree	Dis-agree	Agree	Strongly Agree	TOTAL % (N)
"I certainly feel useless at times."	Partici-pant	18	36	41	5	100 (56)	9	49	34	8	100 (74)
	Comparison	18	40	40	2	100 (57)	18	32	49	1	100 (74)
			Chi-Square = 1.2 Degrees of Freedom = 3 Probability = .75					Chi-Square = 9.75 Degrees of Freedom = 3 Probability = .02			
"I wish I could have more respect for myself."	Partici-pant	26	44	18	11	99 (54)	11	49	26	14	100 (73)
	Comparison	38	38	19	4	99 (57)	17	30	47	6	100 (72)
			Chi-Square = 3.42 Degrees of Freedom = 3 Probability = .33					Chi-Square = 15.98 Degrees of Freedom = 3 Probability = .001			

APPENDIX F

TRAINING PROGRAMS FOR LOW-INCOME WOMEN: A REVIEW

The Work Incentive Program As It Was And Is

The enactment of the WIN program in 1967 represents the first official acknowledgment of a shift in U.S. social policy: mothers, including those of young children, were being actively encouraged to enter the labor force. Concern about spiraling welfare costs and the perpetuation of welfare dependence across generations motivated this change, but it also coincided with a period of increasing labor force participation by women of all ages and family statuses.

The WIN program's mission was specifically aimed at welfare recipients, the majority of whom are women. Its activities and accomplishments have been periodically evaluated, and a number of research and demonstration programs have been carried out over the 16-year period during which the program has been in operation. But other programs, both public and private, have also been targeted on low-income women and sought to improve their employability through training and placement in jobs in private industry and in the public sector.

This comprehensive review of training programs for low-income omen, the results they achieved and the problems they encountered, is presented here in order to put the high-skill training program in Chicago and Columbus in their proper perspective. The review documents the failure of less intensive training and placement programs to bring about meaningful changes in the economic and welfare status of low income women, but it also shows that more ambitious attempts to engineer such changes are seldom as successful as their sponsors had hoped.

During the history of the WIN program, the relative emphasis on institutional training or direct job placement has shifted several times. In choosing classroom skill training over on-the-job training and direct job placement, the Columbus-Chicago experiment more closely resembles the earliest WIN projects than it does later WIN priorities. Although the original 1967 legislation intended WIN to mandate work or work preparation by all employable AFDC recipients, including mothers, another program aim was maximum individual employability development. Participation for mothers was voluntary, and it was concentrated on fairly intensive and lengthy training that would lead to jobs offering opportunities for good earnings and advancement.

Enactment of the Talmadge amendments in 1971 shifted the emphasis to immediate job placements. Registration was made mandatory for all mothers whose oldest child was at least six years old, although ambivalence about enforcing work requirements and lack of placement opportunities led staff informally to exempt many registrants from actual participation. More on-the-job training and public service employment slots were developed, but training in all modes became less

lengthy and extensive.

Because reports of the mandatory placement requirement were disappointing, new regulations in 1975 and legislation in 1980 called for a more "balanced" approach. The program would offer early direct placement efforts to the more job ready and institutional training to the less employable. The 1980 act authorized job placement expenditures for AFDC applicants and stiffened sanctions for non-cooperating AFDC recipients required to participate. The 1981 legislative amendments permitted states to set up Community Work Experience programs from which only those mothers with children under three years of age would be exempt. A few states have chosen this workfare program, while about half have accepted the option of WIN demonstration projects with components more flexibly tailored to local labor market conditions. [1]

Whatever its preferred strategy, WIN has never been funded generously enough to allow a large fraction of its total eligible pool to be served by the program. Nor could most participants engage in very promising levels of human resource development. Compared to the entire AFDC clientele, WIN enrollees have been more likely to have a high school education and to be in their young adult, prime working years. [2] Those assigned to receive some mode of substantive skill training, subsidized work or intensive job placement effort have generally been those deemed more likely to succeed with a modest level of investment in training funds or staff time.

The legislation, implementation guidelines and the formula for allocating the discretionary portion of federal WIN dollars all reinforce a focus on relatively cheap and quick service that favors sheer numbers of job entries over the quality of jobs obtained.[3] Given this short-run goal, the recent WIN staff strategy has been to settle for a mere reduction in welfare benefits, rather than total independence from welfare, as a measure of success. A 1979 field study of the day-to-day processes in three WIN sites documents that the formal guidelines are honored in practice and do indeed foster short-run aims. [4] The emphasis on direct job entry rather than substantive training encourages

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1. U.S. General Accounting Office. 1982. An Overview of the WIN Program: Its Objectives, Accomplishments and Problems. (Washington, D.C.) pp. 1-2; Rein, Mildred. 1982. Dilemmas of Welfare Policy: Why Work Strategies Haven't Worked. (New York: Praeger) pp. 66-81, 154-55.

2. Gordon, Jesse E. 1978. "Win Research: A Review of Findings." p. 28. In The Work Incentive Experience, pp. 24-88. Edited by Charles D. Garvin, Audrey Smith and William J. Reid. New York: Allanheld, Osmun.

3. U.S. General Accounting Office, 1982, pp. 13-14.

4. Levy, Sydelle Brooks. 1981. The Workings of WIN: A Field Observation Study of Three Local Offices. (New York: Manpower Demonstration Research Corporation) pp. xiii-xiv.

quick and unproductive placements. One analysis concludes that the "prime beneficiaries of WIN II have been low-wage employers," who derive from it a crowded pool of labor whose meager earnings are often subsidized by small welfare grants. [5]

Moreover, the type of training WIN usually offered was short-term and did not prepare men or women for jobs giving them much chance for upward mobility. [6] Five to six months was the mean time spent in vocational training components by a national sample of WIN I women so assigned. [7] This policy was particularly damaging for women, who constituted three-quarters of all WIN registrants and were more likely to lack specific work skills and regular work histories. [8] Ex-trainees among one sample of welfare mothers "possessed few job skills that would put them in an advantageous position in locating work" and in fact had worked in about as many months as had their non-trained peers during the previous three years. [9]

Surveys of AFDC recipients indicate that their aims often fit poorly with WIN's current orientation. The majority already have considerable work experience in low-skill, low-paying jobs offering little job security or fringe benefits; those who enter WIN voluntarily, as is the case for many female participants, do so in the hope of escaping the lower echelons of the labor market. About one-third to one-half of AFDC recipients work for some part of each year; analysis of data from the Panel Study of Income Dynamics reveals that from about half to two-thirds of women ever on welfare worked in each of five successive years. [10]

A 1972-73 study found that over half of the surveyed WIN participants aspired to better-paying, more interesting work requiring formal pre-entry training but that barely a tenth had ever held such jobs. Only about one-fifth of jobs attained by the respondents of that

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5. Zall, Richard and Betheil, Richard. 1979. "The WIN Program: Implications for Welfare Reform and Jobs Organizing." Clearinghouse Review (Aug.), 274.

6. Ibid., p. 281.

7. Auerbach & Associates. 1972. An Impact Evaluation of the Work Incentive Program: Final Report, Volume IV. Philadelphia. pp. 3-7.

8. U.S. National Commission for Employment Policy. 1981. Increasing the Earnings of Disadvantaged Women. (Report no. 11). Washington. pp. 126-128.

9. Chrissinger, Marlene Sonju. 1980. "Factors Affecting Employment of Welfare Mothers." Social Work 25 (Jan.), p. 52.

10. Rein, Mildred. 1982. Dilemmas of Welfare Policy: Why Work Strategies Haven't Worked. (New York: Praeger) pp. 148-151.

sample following WIN participation met their expectations. [11] Goodwin compared work orientation measures for "WIN I" (pre-1972 years, when classroom training was emphasized) trainees in six cities and for a sample of long-term welfare recipients in Baltimore with those for samples of nonpoor suburban families. Among both women and men, blacks and whites, he found welfare recipients just as likely as those who were self-supporting to accept the work ethic, to aspire to a good living standard and to be amenable to training in order to increase earning power. [12] Chrissinger reports similar positive views toward working among welfare mothers in a one-city study; these women shared the general societal work ethic, although a sizeable minority eschewed very low-status jobs. [13] In an attitudinal study limited to WIN I participants, Goodwin points to at least a small difference in the outlook of the more successful enrollees: they more firmly resisted the idea of welfare dependency. However, those who entered and completed WIN but were subsequently disappointed in the labor market wound up more discouraged than they were prior to the WIN experience from striving for self-sufficiency. [14] Attrition in "WIN II" (years following the implementation of the 1971 Talmadge amendments) is likewise attributed in part to the clients' recognition that the program offered scant access to well-paid stable jobs.[15]

WIN impacts: yes, no, maybe . Examining national WIN data, Underwood concludes that both before and after participation AFDC women as a group enter "low-skill, low-wage jobs with minimal benefits, training or opportunities for upward mobility." [16] This observation accords with WIN's limited global impact: of the thirty-six per cent of registrants who took jobs in FY 1980, three out of five continued to qualify for full or partial grants. Six to eighteen months after

11. Garvin, Charles D. [et al.]. 1974. Incentives and Disincentives to Participation in the Work Incentive Program. 1974. (Ann Arbor: University of Michigan. School of Social Work.) Cited by Goodwin, 1977, pp. 20. Goodwin, Leonard. 1977, pp. 20. The Work Incentive (WIN) Program and Related Experiences: a Review of Research with Policy Implications. (R&D Monograph 49). Washington: U.S. Employment and Training Administration.

12. Goodwin, Leonard. 1971. A Study of the Work Orientations of Welfare Recipients Participating in the Work Incentive Program. (Washington: Brookings Institution) Cited by Gordon, 1978, p. 32.

13. 1980, pp. 53-54.

14. Goodwin, Leonard. 1977. The Work Incentive (WIN) Program and Related Experiences: a Review of Research with Policy Implications. (R&D Monograph 49). (Washington: U.S. Employment and Training Administration) p. 21.

15. Zall and Betheil, 1979, p. 275.

16. Underwood, Lorraine. 1980. "The Contribution of the Work Incentive (WIN) Program to Self-Sufficiency of Women." Paper prepared for the U.S. National Commission for Employment Policy. pp. 25-27.

initial placement, one out of three jobtakers was no longer working.[17]

One of the reasons for WIN's failure to move its predominantly female clientele into better earnings brackets was placement into traditionally female, low-paying occupations, usually in the service sector or in low-level clerical jobs. A 1974 policy directive did encourage WIN staff to develop non-sex- stereotyped jobs. However, while program records don't classify the sex distribution of WIN training, it is evident that over the years the training and placement package has changed neither the proportion of clients who enter relatively low-skill female-segregated occupations nor the overall male/female entry wage differential. From 1973 through FY 1980, some two-thirds of employed WIN female participants entered clerical and services jobs, while only seven percent found work in traditionally male-dominated occupations. In the same period, new jobs in which WIN women were placed paid on the average three-quarters of the hourly wages received by men placed through WIN. In the non-AFDC-UP states where wages are generally lower and WIN men are usually very young or else disabled, WIN women's wages came to ninety-two percent of men's.[18]

Although the foregoing description of global WIN processes and results presents a negative picture, one must remember that it is based on macro data and may conceal more favorable, selected outcomes. Some evaluations have credited certain WIN components with helping to upgrade the earnings potential of some participant subgroups. The following summary of research findings from special studies emphasizes the value for at least some WIN women of classroom training, with or without various support services, versus more directly job-oriented activities. It is well to keep in mind, however, that compared to the High Quality Training project the Win training here evaluated entailed considerably shorter courses and prepared trainees for employment in predominantly female occupational fields.

Leonard Goodwin's 1977 research review divides WIN studies conducted up to that date by their coverage of "WIN I" years (pre-1972, when classroom training was emphasized) and/or "WIN II" years (after the reversal of the training emphasis). While acknowledging serious methodological flaws in some of these early evaluations, Goodwin teases from the cumulative evidence some signs of moderate efficacy for classroom training.[19] On the whole, though, personal characteristics differentiate the successful participants much more than do the more salient program characteristics.

A year-long follow-up of 1970 female WIN enrollees showed higher scores, on a weighted measure of pay, duration and presence of jobs plus independence from welfare, for those of all races who were older or healthier, who had over three years of prior work experience or who had school-aged children (whether or not they also had preschoolers). The

17. U.S. General Accounting Office, 1982, pp. ii, 19-21.

18. Underwood, 1980, pp. 14-28; U.S. National Commission for Employment Policy 1981, p. 106

19. Goodwin, 1977, pp. 13-18.

higher scorers among the black subjects of this study described their income as sufficient for life's necessities, rented rather than lived with relatives, or took clerical or sales rather than blue- collar services jobs. For whites but not blacks, better scores were associated with having a high school or GED education and believing children were old enough to care for themselves.[20] The present, high quality training study also identified some of these factors.

A 1972 WIN I study by Bradley Schiller places participants' sex, race and age, along with the level of community support for WIN, among the more significant predictors of success. It could credit no specific training, placement or social-service program element with positive impacts but did attribute these in part to smoother WIN-welfare interagency relations. In a survey of young (under 22) WIN participants [21] in 1971-73, about one-third of female terminees left to take jobs, while over a fourth were classed as dropouts. Male and female respondents who had been in on-the-job training were somewhat more likely than those without OJT to be at work immediately afterward; this proved to be a lasting effect, however, only for the group without full-time prior work. Institutional vocational training, though lasting longer than OJT, produced no remarkable effects for either sex. [22]

A final impact study of WIN I revealed no cause-effect relationship between institutional training in public, private or MDTA schools and program completion rates for any sex or race group. Over a third of the female participants in classroom and MDTA activity completed their training acceptably. Thirty per cent of all enrollees were judged as having progressed from one broad skill-level category to another (unskilled, semi-skilled, or skilled). "Successfully terminated" females took jobs paying a third more than their pre-program wages; while this gain was much better than that of women who failed to complete the WIN program but who did get jobs, it did not appreciably reduce welfare dependency.[23]

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20. Miles, Guy H. and Thompson, David L. 1972. Final Report on the Characteristics of the AFDC Population that Affect Their Success in WIN. (Minneapolis: North Star Research and Development Institute.) pp. 15-31.

21. Schiller, Bradley. 1972. The Impact of Urban WIN Programs. (Washington: Pacific Training and Technical Assistance Corp) Cited by Goodwin, 1977. pp. 14-16.

22. Richardson, Ann and Dunning, Bruce B. 1975. Youth in the WIN Program: Report on a Survey of Client Backgrounds, Program Experience and Subsequent Labor Force Participation. (Washington: Bureau of Social Science Research) pp. 73, 97-100, 127-28.

23. Auerbach & Associates, 1972, pp. 3-53, 3-62, 5-49, 5-51.

Studies of the WIN I and some MDTA institutional training projects report quite high completion rates--in the 65-85% range; and a large majority of women, including dropouts, made positive assessments of the MDTA classroom training. [24] Two WIN I-WIN II comparison evaluations hint that the former's training emphasis was a plus factor: Schiller's 1974 study finds more complete individual employability plans and higher employment rates (although essentially equal wage rates) for WIN I terminees; Hokenson et al. established that vocational-trainee WIN I women (not men) were better able to get and keep jobs and that WIN I male and female job-takers earned some $100 per month more than did their WIN II counterparts. It is unclear to what extent these findings might be masking creaming effects or averaged-out inter-site differences. [25]

Other evaluations credit WIN I or II vocational training for helping women to find employment or to move into jobs more desirable than those they had held before they entered WIN. [26] One cost-benefit analysis, taking externalities into account, finds the net WIN II impact to be the displacement by successful terminees of other members of the working poor. Only those relatively few WIN II participants who had been assigned to vocational training produced a decrease of total AFDC costs. [27]

In a carefully conducted and comprehensive longitudinal WIN II evaluation, Schiller, et. al. discovered that a sample of active WIN participants at seventy-eight sites were no more likely than non-participant registrants to achieve full self-sufficiency. The earnings gains allowed an average cross-site reduction in the welfare grants of post-WIN women by a mere $106 per year more than the change in benefits for women in the comparison group. For men, who lose entitlements

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24. Gordon, 1978, p. 41.

25. Schiller, Bradley. 1974. The Pay-Off to Job Search: The Experience of WIN Terminees. (Washington: Pacific Training and Technical Assistance Corp) Cited by Goodwin, 1977. pp. 16-17. ; Hokenson, Earl, Reuther, Carol J. and Henke, Susan R. 1976. Incentives and Disincentives in the Work Incentive Program. (Minneapolis: Interstudy) Cited by Goodwin, 1977. pp. 16-17.

26. Smith, Audrey, Fortune, Ann, and Reid, William. 1975. After WIN: A Follow-Up Study of Participants in the Work Incentive Program. (Chicago: University of Chicago. School of Social Service Administration) Cited by Goodwin, 1977, and

Wiseman, Michael. 1976. Change and Turnover in a Welfare Population. (Berkeley: University of California, Department of Economics) Cited by Goodwin, 1977.

27. Ehrenberg, Ronald G. and Hewlett, James G. 1975. The Impact of the WIN 2 Program on Welfare Costs and Recipient Rates. (Washington: U. S. Department of Labor, Office of Evaluation and Research) Cited by Goodwin, 1977, p. 17.

faster as their earnings rise, the figure was $164. Participants' total income, i.e., earnings plus grants, rose notably more among women, whites and those with less recent prior work experience. These analysts stress the great variability across sites of services actually delivered. [28]

Rein points to "abysmally low" post-WIN II wages, productive of earnings sufficient to make only two-thirds of men and one-third of women ineligible for supplementary welfare grants.[29] Disaggregating effects along a "level of service" scale which ranks vocational classroom training below subsidized employment (including on-the-job training or public service employment) and above support services and remedial classroom education, Schiller, et. al. discovered that women without recent work experience who received vocational training enjoyed significantly larger pre- to post- program gains (some $800 per year over those of the unassigned registrants). Women who started WIN with more impressive resumes were much more likely to get jobs immediately but did not make substantial earnings gains unless WIN had offered them a subsidized employment component. This is in sharp contrast to the finding that whatever their level of previous employment, no WIN men made significant earnings gains unless they were assigned to a form of subsidized employment. The short-term gains per year for OJT-PSE terminees averaged a quarter-year's employment for both sexes and some $1500 in annualized earnings for women ($1200 for the more experienced women; about $1900 for the average man). Black women gained somewhat less than white women. [30]

The follow-up period of this study was most commonly nine months.[31] Data showing the longer-term earnings impact of classroom training would have been useful in order to validate the assumption that OJT constitutes the "highest-level" WIN service, especially in view of the contradictory finding reported in CETA evaluations with multi-year follow-ups (see pp. 21-22). Schiller, et. al. do make a convincing case that for most AFDC subgroups, WIN's offerings of only placement services or remedial education are ineffective, and that the regular WIN version of classroom training is of insufficient quality or duration to help those already relatively well prepared for the labor market. Women who actually participated were much more likely to receive child care and transportation aid than was the comparison group, drawn from the inactive pool of WIN registrants (over one-third of participants, six percent of controls), but receipt of those support services also had no clear bearing on eventual earnings gains even though WIN participants

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28. Schiller, Bradley, 1976. The Impact of WIN II: A Longitudinal Evaluation of the Work Incentive Program. (Washington: U.S. Employment and Training Administration) pp. 3-6.

29. 1982, p. 81.

30. Schiller, et. al., 1976, pp. 117-31.

31. Schiller, et. al., 1976, p. 46.

reported them as being very valuable. [32]

A General Accounting Office analysis of FY 1980 WIN results credits specific program components (classroom or on-the-job training, public service jobs or intensive job search aid) with a statistically insignificant impact. None of these experiences distinguished among jobtakers, similar on crucial demographic variables, who attained self-sufficiency and who remained on the AFDC rolls. The personal characteristics found to be associated with full self-sufficiency were being married (and therefore presumably not totally dependent on income derived from paid work), high-school educated, younger than 25 and having fewer than four children and less than a year of welfare recipiency. Clients who left the welfare rolls did not differ by sex, race or total household size. Program data combined with participants' accounts indicate that WIN probably helped about half the jobtakers in some way, although seventy per cent of employed registrants located jobs on their own. This study did not measure differences in social services delivery to inactive registrants versus ones assigned to specific training components (classroom or on-the-job training, job clubs, work experience or public service employment, etc.) but does point to them as a possible source of variation in outcomes.[33]

Other WIN studies find that program experiences other than components assignment have had a significant role in explaining program outcomes. A three-city 1972-73 WIN investigation points to the need for substantial child care and health care, among other auxiliary services. A number of well-motivated clients failed to enter training, despite the completion of training arrangements, or dropped out before finishing their program because of child care or medical problems. Even in these large cities--Chicago, Detroit, and Cleveland--formal child care centers lacked sufficient flexibility in the hours they were open and the ages and health status of children whom they would accept. [34] Another study identified several other program facets as correlates of a composite performance measure: choice of institutional training for certain clients, intense job search training and structured searching activity, individualized job development efforts, rich variety of social services beyond child care, frequent contact between WIN social service and employment staff, and various qualities of program management. [35]

32. Schiller, et. al., 1976, pp. 147-53.

33. U.S. General Accounting Office, 1982, pp. 16-29.

34. Smith, Audrey and Herberg, Dorothy. 1972. Child Care in the Work Incentive Program. (Chicago: University of Chicago, School of Social Service Administration) Cited by Goodwin, 1977, pp. 20-21.

35. Mitchell, John J., Chadwin, Mark L. and Nightingale, Demetra S. 1980. Implementing Welfare Employment Programs: An Institutional Analysis of the Work Incentive (WIN) Program. (R&D Monograph 78). (Washington: U.S. Department of Labor) pp.375-76.

WIN lessons: some basic issues and proposed remedies. The reasons offered for the limited nature of WIN's impact may be grouped into three types: inability to provide other than low-level jobs; placements in sex-stereotyped occupations which cluster in the secondary labor market; and insufficient recognition of the special needs of many AFDC women. These problems are discussed in turn, with mention of some possible remedies.

1. Inability to provide other than low-level jobs. Both Goodwin and Gordon conclude thorough reviews of WIN research with a clear statement that regular WIN training and associated services have been too limited, given the pervasive influence of local labor market conditions, to raise the prospects for any sizeable participant subgroups to support themselves above the poverty level. [36] WIN has only helped the poorer of the poor to approach the earnings potential of the slightly less poor. Black women may be singled out as particularly vulnerable and therefore more apt to benefit from WIN. Gordon points to the "internal paradoxes" whereby WIN has targeted a lion's share of its modest aid to the males and the more employable females for whom it is least able to produce its modest results. [37]

The recent General Accounting Office study concludes that present WIN services, tending more toward low-skill workfare experiences, are best able to help the currently non-participant pool of registrants, while extra resources such as those offered in some WIN demonstration programs are necessary to make the whole investment worthwhile for most of the currently active participants.[38] Surveying some recent WIN demonstrations which emphasize immediate placement and job creation, Schiller believes they neglect the needs of many clients for "skills, services and confidence to succeed" on their new jobs. He thus argues for combining intensive labor-supply and labor-demand strategies, so as to allow more WIN participants to get and to keep well-paid positions. [39]

In the opinion of many social scientists, the basic problem is the existence of a dual labor market and WIN's inability to place its clients in the more desirable primary segment: the occupational fields dominating WIN training and employment are in the secondary labor market, characterized by low wages, low job security, high turnover and lack of fringe benefits. From this perspective it is argued that WIN should aim for placements in the primary labor market, where even part-time labor force participation gives mothers of young children a real

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36. Goodwin, 1977; Gordon, 1978.

37. Gordon, 1978, pp. 79-81.

38. U. S. General Accounting Office, 1982, p. 18.

39. Schiller, Bradley, 1981. "Welfare: Reforming Our Expectations." Public Interest No. 62 (Winter), pp. 63-64.

chance to earn an adequate income, [40] or more generally that WIN should emphasize intensive work experience and training programs to move women out of secondary market occupations. [41]

2. Placement in more desirable occupations. Beyond raising the general skill-level of WIN training, some reformers advocate efforts to prepare WIN women specifically for male-dominated fields. They can cite abundant evidence that occupational sex segregation in itself helps to depress women's wages, despite the fact that some of the sex differential in earnings among full-time year-round workers is explained by male advantages in education, skill level, seniority and constancy of prior labor force attachment. However, comparison of the skills used in typical male versus female occupations reveals differences in the kinds of tasks performed but none in the degree of their difficulty. Predominantly female fields demand, on the average, cognitive skills and schooling nearly equal to the requirements of male-dominated occupations which pay a good deal more. [42] An analyst of General Social Survey data for 1974-77 calculates that "positional inequality," that is, differences in jobs rather than in the human capital of jobtakers, accounts for at least one-eighth of the gender gap in earnings. [43]

WIN clients and counselors are sensitive to this issue, and over the years a few WIN participants have been trained for predominantly male occupations. However, this type of training was relatively infrequent, partly because OJT is often the preferred training mode, [44] and employers and co-workers have rejected the introduction of women to such positions. [45] To some extent, this is merely another aspect of WIN's failure to provide its clients with access to the primary labor market. But even in the secondary labor market, male-dominated occupations generally pay higher wages than those which are predominantly female and most studies of employed WIN participants show a consistent earnings

40. AuClaire, Philip. 1979. "The Mix of Work and Welfare among Long-term AFDC Recipients." Social Service Review 53 (Dec.), pp. 599-600.

41. Swartz, B. Katherine. 1980. "Helping the Jobless: Theories and Practice." Wilson Quarterly 4 (no.1, Winter), pp. 144-145.

42. England, Paula, Chassie, Marilyn, and McCormack, Linda. 1982. "Skill Demands and Earnings in Female and Male Occupations." Sociology and Social Research 66 (Jan.), pp. 163-64.

43. Roos, P. A. 1981. "Sex Stratification in the Workplace: Male/Female Differences in Economic Returns to Occupations." Social Science Research 10 (Sept.), pp. 196, 220.

44. Mixer, Madeline. 1982. [Quoted in news report]. Manpower and Vocational Education Weekly, Dec. 2, p. 8; U.S. National Commission for Employment Policy, 1981, p. 94.

45. Hernandez, Ruth Robinson. 1980. A Woman's Guide to Apprenticeship. (Washington: U.S. Women's Bureau) p.4.

advantage for men. [46] It may well be that in many cases it is unrealistic to expect that WIN or its female clients can overcome the traditions and discrimination patterns which are deeply embedded in many local markets. Some observers believe that even if WIN were to emphasize nontraditional, higher-skill training, the structure of the labor market would present "the ultimate obstacle" to placing mass numbers of WIN women in good and lasting jobs.[47] Hence Goodwin, like Schiller, advocates complementing WIN training, particularly for female heads of households, with decent-paying guaranteed jobs.[48]

3. Special needs of AFDC mothers. The basic WIN strategy of making a job more financially rewarding than welfare for AFDC recipients disregards certain non-income-related incentives for limiting labor force participation. Cultural norms encourage welfare women, like other women and unlike men, to put their concerns for family relationships at least on a par with their work-world interests. [49] Yet the extent to which the multiple responsibilities of female WIN clients create obstacles to full-time employment and self-support have not been faced realistically by the program. Women who are household heads typically enjoy less leisure, as well as less income, than do wives living with their husbands. [50] Even for nonpoor, married mothers of young children, working full-time may entail considerable opportunity costs and role strain. [51]

Since WIN clients are usually household heads with one or more children, they are especially dependent on child-care and other services if they are to work full-time. Chrissinger found that of the women in her AFDC sample those with older children who could care for younger ones were working significantly more.[52] In another study, even though child care services were approved at the time of registration for two-thirds of WIN participants in the sample, half of these women still had

46. Camil Associates (Philadelphia). 1974. A Retrospective Case Review of WIN-II Completed Job Entries: Grant Reductions, Services and Welfare Savings. (Washington: U.S. Department of Labor) tables 4-9; Rein, 1982, p. 81; Schiller, 1972, p. 36; Schiller, 1974, p. 43; Underwood, 1980, pp. 14-28.

47. Zall and Betheil, 1979, p. 276.

48. Goodwin, 1977, pp. 35-37; Schiller, 1972; Schiller, 1974.

49. Klausner, Samuel Z. 1982. Policy Implications of the Camden WIN Study. (Philadelphia: Center for Research on the Acts of Man) pp. 1-9.

50. Danziger, Sheldon et al. 1980. Work and Welfare as Determinants of Female Poverty and Household Headship. (Madison: University of Wisconsin, Institute for Research on Poverty) Also published in Quarterly Journal of Economics 97 (August 1982), p. 29.

51. Thomson, Elizabeth. 1980. "The Value of Employment to Mothers of Young Children." Journal of Marriage and the Family 42 (no. 3, August), pp. 552, 562.

52. Chrissinger, 1980, p. 54.

difficulty in arranging transportation to WIN activities and to jobs.[53] Services to fill such needs are frequently unavailable in communities hard hit by recent budgetary cutbacks. Within a largely welfare-dependent sample of young women who had recently borne their first child, Presser reports that those most able to return to school were very likely to live with relatives and to depend on family members for free child care. She proposes that subsidized child care programs include infants, in order to permit young mothers to re-enter school or the labor force earlier. [54]

The loss of other benefits associated with the shift from welfare to work status creates similar difficulties. In Chrissinger's sample AFDC families made frequent use of medical benefits (1.7 times per month) and felt that quite substantial earnings would be required if women are to forego the security of the welfare package.[55] Goodwin proposes lowering the risks associated with mothers' entry into the labor market by expanding the support system, including health services and child care, and extending it to full-time job holders.[56] Although rather more inclined to turn to private sector resources, Rein too highlights WIN mothers' needs for stabler jobs paying better than the minimum wage plus assured health care and after-school child care. She figures that such provision alone would eliminate the more employable quarter to third of the AFDC caseload, while other employable segments of the AFDC population require skill training or full-time child care aid.[57]

CETA

CETA characteristics: clients and components. Besides WIN the single largest federal vocational training program serving low-income women has been CETA. Most female and many male clients under the CETA titles serving the structurally unemployed may be considered to be at risk of welfare dependency. One-third of female enrollees in the FY 1978 CETA adult-oriented programs did then receive public assistance, mainly AFDC; the same proportion of all new adult CETA participants is reported for FY 1980. Welfare recipients were slightly overrepresented

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53. Underwood, 1980, pp. 41-42.

54. Presser, Harriett B. 1980. "Sally's Corner: Coping with Unmarried Motherhood." Journal of Social Issues 36 (no. 1, 1980), pp. 119, 127.

55. Chrissinger, 1980, p. 54.

56. Goodwin, 1977, p. 36.

57. Rein, 1982, pp. 152-153.

among CETA's classroom trainees. [58] In the first half of FY 1982 this overlap of WIN and CETA clientele comprised some nine per cent of enrollees in WIN employment or training components.[59] Thus studies of CETA interest us here not only because that program is much Like WIN; it has been a sizeable part of WIN. Presumably those of its registrants whom WIN assigned to CETA shared the relative labor-market advantages of active WIN participants in general. Comparing the entire 1979 or 1980 adult enrollments of WIN and CETA, one finds roughly similar proportions who are minority group members (around one-half), who lack a high school education (around forty per cent), and whose age is over forty-four years (around fifteen per cent). A major difference, apart from but certainly not unrelated to the welfare- dependency rates, is gender. Although the late-1970's growth in CETA enrollment was more female than male, women in FY 1980 made up about fifty-five per cent of new adult CETA enrollees and seventy-five per cent of WIN registrants. [60]

Like WIN goals, those of both CETA and the earlier categorical programs authorized by the Manpower Development and Training Act (MDTA) have been quite modest: to prepare clients for or place them in entry-level jobs in relatively low-skill, high turnover occupations. In both programs, a few such fields have dominated training curricula, among them the female-dominant areas of clerical work, health care, and food service occupations. Also as in WIN, the strategy shifted from emphasis on classroom training, for which two-thirds of MDTA funds were spent, to a greater reliance by CETA on more directly job-oriented activities. From 1975-1980, however, CETA outlays for classroom training rose steadily from one-third to over half of all Title I/IIBC funds, while on-the-job training expenses remained near ten per cent of the total. [61] Since their beginning, however, the federal efforts have sought to contain per capita costs and therefore have offered only brief periods of training. Under CETA, the average classroom course lasted 5.5 months, although training duration is one among many qualities that

58. U.S. Employment and Training Administration. Office of Program Evaluation. 1980. Females Enrolled in Decentralized CETA Programs. Unpublished report prepared for U.S. Department of Labor. 1982, p. 14;

U.S. Congressional Budget Office and U.S. National Commission for Employment Policy. 1982. CETA Training Programs: Do They Work for Adults? Washington. pp. 4-6.

59. U.S. Work Incentive Program. ESARS National Report, 3/31/82, table 32.

60. For WIN: Employment and Training Report of the President, 1981, p. 42; U.S. Work Incentive Program. 1980. WIN: 10th Annual Report to the Congress [FY 1979]. Washington. p. 27.

For CETA: U.S. Congressional Budget Office and National Commission for Employment Policy, 1982, p. 6; U.S. Employment and Training Administration. Office of Program Evaluation, 1980, pp. 3-4.

61. Levitan, Sar and Mangum, Garth. 1981. "Summary of Findings and Recommendations." In The T in CETA: Local and National Perspectives. (Kalamazoo, MI: Upjohn) pp. 8-12.

varied considerably across project sites.[62] Adult work experience and OJT also averaged about 20 weeks.[63]

Several aspects of CETA administration and performance assessment lower staff incentives to seek long-run benefits over quick, cheap job entries; for instance, the cost-per-placement basis of evaluation discourages spending for support services and the extra counseling and public-relations efforts necessary to place large numbers of women in male-dominated and other more desirable fields. [64] In allocating FY 1978 classroom training slots, CETA staff assigned some two-thirds of each sex to the general occupational fields that participants desired. Such assignment was, however, rather more common for the clerical and services training aspirants than for those who wanted professional/technical/managerial training.[65]

CETA impacts: what for whom?. Backed by the sophisticated Continuous Longitudinal Manpower Survey, evaluations of the regular adult CETA projects show somewhat positive overall effects on earnings. Variations of impact among program components and client subgroups, however, are less clear and more striking than the global CETA effects. Compiling results from some twenty less rigorous evaluations of pre-CETA categorical federal training programs, Taggart displays a consensus that classroom training raised earnings of women by some $300-$600 per year and on-the-job training, somewhat more. The same studies disagree widely as to the training impacts on males' incomes. [66] The first sets of two-year follow-up data on CETA cohorts suggest that classroom training has a slower but surer earnings impact than does OJT. While OJT outpaced all other components for most subgroups (e.g., sex, race, age, etc.) in the first post-program year, the average gain from OJT faded in the second year, more sharply for those whose pre-program earnings had been lowest. Classroom trainees' smaller initial gains increased in the second year, quite substantially for women as a group. For previous lower earners, however, this impact declined in the second year. For females and higher previous earners, among others, classroom training showed less impact than did public service employment (PSE). White women, in fact, seem to have gained more from PSE than from any

62. Levitan and Mangum, 1981, pp. 44, 19-21.

63. U.S. Congressional Budget Office-National Commission for Employment Policy, 1982, p. xvi.

64. U.S. National Commission for Employment Policy, 1981, pp. 111-117.

65. U.S. Employment and Training Administration. Office of Program Evaluation, 1980, tables B18 and B38.

66. Taggart, Robert. 1981a. A Fisherman's Guide: An Assessment of Training and Remediation Strategies. (Kalamazoo, MI: Upjohn) pp. 54-55.

67. Taggart, 1981a., pp. 76-78; Taggart, Robert. 1981b. "A Review of CETA Training." In The T in CETA: Local and National Perspectives. Edited by Sar Levitan and Garth Mangum. (Kalamazoo, MI: Upjohn) pp. 99-100.

other component. [67]

Another analysis of CLMS data regards the CETA program from a different perspective and presents rather different conclusions about its impacts. Limiting its scope to the comprehensive training programs of Title II-B and -C (disregarding PSE) and adding some third post-year follow-up data, this study reports roughly equal gains in earnings, some $1000 per year over controls', for CETA women in the three major training components (classroom, on-job and "work experience"), for which costs and average duration were similar. [68]

Despite some recent progress in meeting its legal mandate to reverse the sex-segmented occupational distribution pattern, CETA in 1978 placed sixty-two per cent of its adult women terminees in jobs its regulations define as female-traditional, but only twelve per cent in dominantly male fields. [69] Participants' aspirations, coupled with lack of counselling, can account only in part for the slow pace of change. From 1976 to 1978 the percentage of adult CETA women desiring a male-traditional or mixed-gender job rose substantially, from thirty-one to forty-five percent, but the proportion of this group whom CETA, PSE, or AWE placed in female-traditional jobs rose from thirty-three to forty-five percent.[70]

CETA lessons . Further analyses of the CLMS data base suggest that the reason women-- unlike men--benefitted substantially from participation in CETA is really program-independent: participant women had earned consistently less than female controls for many years before CETA enrollment, while men's pre-CETA earnings were depressed only in the immediate prior year. As did some WIN evaluators, one CLMS analyst argued that the program worked much better for less-experienced workers because they have a greater margin for increasing their hours of employment, but that it fails the more experienced chronic low earners because it prepares no one for really well-paying jobs. Thus the women who improved their earnings more than did the men still wound up with wage rates lower than the men's.[71] The more optimistic CETA analysts also' point out that even after two years, rises in working hours rather than wages accounted for three-quarters of classroom trainees' earnings improvements and for four-fifths of those of on-the-job trainees. [72]

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68. U.S. Congressional Budget Office-National Commission for Employment Policy, 1982, pp. xvii-xxii.

69. Berryman, Sue and Chow, Winston. 1981. "CETA: Is It Equitable for Women?" (Unpublished). Cited by U.S. National Commission for Employment Policy, Increasing the Earnings of Disadvantaged Women. Washington, pp. 94-95.

70. U.S. National Commission for Employment Policy, 1981, pp. 98-101.

71. U.S. Congressional Budget Office-National Commission for Employment Policy, 1982, pp. xvii-xxii, 7.

72. Taggart, 1981a, pp. 83-87; 1981b, p. 100.

Another way to judge how CETA worked is to consider where its impact on upward mobility fell. In the first place, about a third of classroom and of on-the-job trainees were assigned to study fields of the same broad classes in which they had already held jobs; thus their scope for advancement was quite limited, given the general low-skill level of CETA training. At the end, only about one-half of each group of trainees obtained jobs in occupations corresponding to their training fields. The training-related placement rates tended to vary with status of occupation. Among classroom trainees, for example, it was well above average for female clerical fields and below average for professional and nonconstruction crafts; on-the-job trainees in the middle-status fields were likeliest to obtain matching jobs. On the whole, upward mobility was enjoyed mainly, and then but modestly, by those who started lowest, namely laborers and service workers.[73] Many CETA participants evidently attained either few new skills or ones in little demand. Thus it is easier to understand why their wage rates on average rose little.

A brief follow-up survey of Boston's 1975-76 CETA trainees and a comparison group of applicants presents some supplementary evidence of labor-market interaction with CETA training. In this study, job retention was strongly associated with field of training and the training-relatedness of jobs taken. Hourly wages after some months also varied widely by training field, although the simple training experience, across occupational fields, affected wages much less strongly than it did job retention. Two of the higher-wage types of training-- health care and food preparation--were in female-dominant fields. Nevertheless, women with equal amounts of training were still earning substantially less than men, even when one accounts for the differential effects of occupational field on wages. [74]

A focus on intra-program differences by mode of training may, then, be less illuminating than looking at variations in field of training, or, more precisely, at the latter's match with local labor needs. Possibly OJT ranks high on immediate placement rate criteria because it is more feasibly used for higher-demand than for lower-demand fields, or because it naturally tends to place trainees in matching occupations. Clearly its impact on wages is enhanced by its more frequent utilization for male-dominated, blue-collar work. An analyst of MDTA institutional versus on-job training modes finds comparability hampered by differences in types of people assigned to them as well as in kinds of occupations for which they are used.[75] Classroom training may lack these structural advantages of OJT without being essentially a less effective mode of vocational education.

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73. Taggart 1981a, pp. 97-100; 1981b, pp. 104-105. Unfortunately, a very low response rate mars this survey's data.

74. Sawhney, Pawan K., Jantzen, Robert H. and Herrnstadt, Irwin L. 1982. "The Differential Impact of CETA Training." Industrial and Labor Relations Review 35 (Jan.), pp. 243-251.

75. Gordon, 1978, p. 45

Assembly of other evidence shows that duration of training also matters. CETA women who participated in work experience and classroom training for about six months later earned some $300-$400 more per year than did those who left after three months; for on-the-job trainees, the difference between the shorter and longer periods was double that amount.[76] Taggart figures that classroom trainees who train as long as nine months gain six times more than those who train for only three to five months. [77] Explanations for the apparent value of longer-term training are mixed: they include sorting, that is, self- or staff-selection of the persevering and the capable; program completion, separable from length, which often provides new credentials; extra time for staff placement efforts; as well, of course, as some degree of additional skill attainment.

The more cautious CETA analysts doubt that the routine type and length of CETA training results in meaningful skill improvement, given its entry-level job goal and their finding that CETA classroom and OJT activities are not superior to the work experience component. Yet they hold out the possibility that "more extensive training that focused on higher-level skills" might be productive and have a greater earnings impact for men and women alike who begin with relatively good work histories and skills.[78] Similarly, Taggart suggests that the qualified successes of CETA classroom training, as implemented, have relied heavily on sorting the abler and finding them jobs, but that CETA has underused its potential for credentialling and developing skills.[79]

Intensive Training Projects

This last section briefly reviews several demonstration training projects, much smaller than WIN and CETA, that have been sponsored by the Federal government since the early 1970's. Their common feature of interest here is high intensity of effort per client, a point of contrast with the regular WIN and CETA program and of similarity to the Chicago-Columbus WIN experiment. Because each of these programs was able in some way to stretch the usual limits of federal employment and training efforts, they meet the typical criticisms of high-cost training programs and test the common proposition that a larger investment in work skill development would reap substantial rewards for clients and for society.

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76. U.S. Congressional Budget Office-National Commission for Employment Policy, 1982, pp. 27-29.

77. Taggart, 1981b, pp. 102-06.

78. U.S. Congressional Budget Office-National Commission for Employment Policy, 1982, pp. 29, 37.

79. Taggart, 1981b, pp. 115-117.

Vouchers for Training.

Several routine federal training projects have allowed some participants to use government vouchers for payment at institutions and for courses of their own choice. A secondary study of four such programs [80] reports participation rates of one-fifth up to one-third of eligibles, when stipends are included, with greatest interest shown by the younger, female, better educated and initially more skilled segments of eligible populations. One project's voluntary counselling service was underused: most participants preferred informal bases for choosing a course of study. Many clients opted for longer, more ambitious, and therefore more expensive training in occupations not traditionally covered in programs for the disadvantaged. While average outcomes in employment and earnings for these sets of vouchered trainees proved no different from success rates of regular trainee counterparts, the null net effect masks outstanding gains for a few with superior initial education and experience. [81]

One of the vouchered training programs, a subset of the Seattle/Denver Income-Maintenance Experiments (SIME/DIME), elicited particularly strong interest on the part of low-income female household heads in high-level training. For three or five years, starting in the early 1970's, SIME/DIME offered adult members of low-income families either a half or full subsidy of the direct costs of schooling related to occupational goals clients had formally set for themselves during vocational counseling sessions at local community colleges. Available without the subsidy to a control group, the nondirective counseling left clients free to undertake training for higher- skill fields than comparably disadvantaged populations are conventionally advised to enter.[82] Upward mobility proved indeed to be the aim of the large majority of eligibles who made plans for occupational training. Over forty per cent of these intended to prepare for professional careers, though only seven per cent had held a professional job before contact with the SIME/DIME counselors. Greater proportions also sought managerial and crafts work than had previously been so employed, while fewer planned for training in clerical, operative and services fields than had earlier worked in these areas. About half the participants planned to take college coursework, mainly in AA or BA degree programs. [83] Among the subsidy-eligible, single mothers proved more willing than

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80. The Seattle-Denver Income Maintenance Experiment, The Portland Win Voucher Demonstration, The Portland WIN Demonstration, and The Dayton Wage Voucher Experiment.

81. Sharp, Laure. 1982. Vouchering Manpower Services: Past Experiences and their Implications for Future Programs. (Washington: Bureau of Social Science Research) pp. 4-6, 94-101.

82. Sharp, 1982, pp. 13-17.

83. Hall, Arden. 1980. "Education and Training." In A Guaranteed Annual Income: Evidence from a Social Experiment. (New York: Academic Press) pp. 273-74.

husbands or wives to use the vouchers. Over one-third of female heads received fifty per cent subsidies and forty-seven per cent, full subsidies; about one-fifth and one-third, respectively, of husbands and of wives availed themselves of the vouchered training opportunity. It would seem that the greater economic vulnerability of female heads of household prompted their higher level of aspiration for employability development.

SIME/DIME analysts compared experimental and control group members on the extent of schooling taken through the whole period of voucher eligibility. Single female heads over age 30 were the only group of half-subsidy-eligibles who significantly exceeded the level of school enrollment among their control group counterparts; they also showed the greatest training increase among full-subsidy eligibles, although some impact of one hundred percent voucher coverage was also evident for husbands, wives and younger female heads.[84] As for eventual earnings outcomes of vouchered recipients, no consistent pattern of gains over the control group had appeared by year six of the experiment, that is, during three post-training years for three-year eligibles and one post-training year for five-year recipients. Those follow-up periods may have been too short to erase the effects of trainees' foregone labor market experience, but it is also possible that many trainees' ambitions were ill-suited to their own capacities or to the local labor market. [85]

Supported Work.

In contrast to self-selection by the "cream" into the vouchered training programs, the five-year supported work demonstration targeted its brand of intensive training to "bottom of the barrel" clients, including a group of female long-term AFDC recipients of whom most were black or Hispanic and lacked high school education and recent work history. Although their preparation was mainly for low-skill jobs in diverse occupations it was of notably higher quality than most usual WIN and CETA activity. Training lasted an average of 9.5 months and up to eighteen months, it involved close on-job supervision with gradually rising standards of performance, and it provided substantially more child care service. [86] While local CETA sites have been faulted for not coordinating the services of various delivery agents or appropriately sequencing enrollees through them, [87] supported work planned for certain portions of paid time to be used for pre-designed,

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84. Sharp, 1982, pp. 20-23.

85. Sharp, 1982, pp. 28-33.

86. Manpower Demonstration Research Corporation. 1980. Summary and Findings of the National Supported Work Demonstration. (New York: Ballinger) pp. 6,73, 150-151.

87. Levitan & Mangum 1981, pp. 47-48.

88. Manpower Demonstration Research Corporation 1980, p. 24

work-related ancillary services, including placement efforts.[88]

More than a year after leaving the program, the supported work experimental group sustained solid advances over a control group, which included many WIN and CETA enrollees: higher employment rates, a third more hours worked, fifty percent higher earnings, wages of 12 to 38 cents more per hour, and significant reduction or elimination of welfare dependency. The longer-term effects were particularly large for the most disadvantaged of even this group.[89]

Skill Training Improvement Project (STIP).

At one hundred forty-odd special CETA sites in the first phase of the STIP demonstration, a varied set of more concentrated training components were introduced, intended to move clients out of the low-skill, low-paid sector of the economy. Although required to have low incomes, enrollees nevertheless were very much the "cream," with more labor-market advantages than the typical Title I CETA client. STIP enrolled a higher proportion of males (nearly two-thirds); this is attributed to client self-selection into the preponderantly male trades in many STIP curricula. Training providers had the right to make final choices among applicants and frequently required a high school education or a passing score on standard aptitude tests. Thus eighty-five percent of STIP participants were high school graduates, in contrast to fifty-six percent of regular CETA clients. More STIP clients fell into the prime working-age bracket (22-44 years old); however, larger percentages were also non-white and "economically disadvantaged," rather than qualifying on the basis of long-term unemployment. [90]

Across STIP sites the most constant feature was thorough involvement of private-sector representatives. They helped choose occupations in high local demand, reviewed curricula, often screened applicants and selected instructors. At a majority of sites private firms, associations and schools delivered the classroom training. Looking closely at local market needs, a majority of projects offered only one to three fields, but a sizeable number included over a dozen. Among the more common occupations were machinists, welders, mechanics, data processors, human services workers, and high-level secretaries. Female participants were by and large assigned to data processing and secretarial training rather than to predominantly male fields. Plans called for about half the STIP I projects to give only classroom instruction, often quite difficult, in high-skill fields; the rest would add a period of subsidized on-job training after similar coursework. Some sites in each group limited clients' total training periods to one year, while others allowed up to eighteen months. As it worked out, many trainees finished in less time than anticipated--partly because open entry/open exit systems proved expeditious, but especially because

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89. Manpower Demonstration Research Corporation 1980, pp 73-75.

90. Abt Associates, 1979b. STIP I: CETA and the Private Sector; Implementation Experiences of Selected Projects. Cambridge, MA. pp. 20, 44-49.

many participating employers preferred to hire trainees in such high demand fields at the end of the classroom phase rather than to implement on-the-job training.[91]

The summary of outcomes across STIP sites does not, unfortunately, disaggregate data by sex of participant. Dropout rates varied widely among projects, from fourteen to fifty-five percent at points before project completion; on the whole, STIP I retention was deemed comparable to that of regular CETA. Given their advantages before entry into the program and the high trainee investment, STIP I graduates were expected to achieve higher placement rates and entry wages. Early post-program data confirmed these expectations. STIP quickly placed nearly twenty percent more of its terminees than did Title I (64% versus 45%), and in jobs with average hourly wages forty percent higher. Though they have not yet precisely assessed the effects of more carefully selecting trainees and occupations, the primary evaluators of STIP I believe that the impact of other program features was separable and substantial. Private sector input, in particular, is credited for raising the reputation, as well as the intrinsic quality, of STIP training. Placement efforts focused the attention of many parties on individual trainees and produced prior tentative hiring commitments from employers who generally made good on their promises. Perhaps the most surprising among the STIP I effects is the willingness of employers to pass up subsidies for on-the-job training. [92]

Training women for nontraditional jobs.

CETA's Title IIIA authorized its national office to administer projects targeted to women or to several predominantly female groups, among others. This National Program for Selected Population Segments (NPSPS) as of FY 1980 had funded no projects for single parents or public assistance recipients, [93] designated target groups whose experience one would have especially wished to compare to that of the WIN clients in Columbus and Chicago. NPSPS did make twenty-six grants for women's projects, most of which resemble the WIN experiment in offering some mode of skill training in nontraditionally female fields. Many were fairly high-skilled trades-- maintenance and repair of air conditioners, home appliances, computers; auto and insurance sales; wastewater treatment; truck driving; welding; and small business proprietorship. Many NPSPS women's projects provided a wide range of auxiliary services, including such innovative forms of aid as physical fitness classes, remedial math, assertiveness training and loans for repairing cars that clients needed to get to OJT placements. In a survey of Title III enrollees and Title I comparison group members, respondents of both groups reported receipt of much counseling, resume

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91. Abt Associates, 1979b, pp. 5-7, 12-15 and conversation with Marcia Cohen Jerrett of Abt Associates.

92. Abt Associates 1979b, pp. 14-16, 78-79.

93. U.S. National Commission for Employment Policy, 1981, pp. 103-106.

assistance and job development. [94] It is difficult exactly to compare these women's training project participants with WIN and regular CETA enrollees, since the NPSPS survey report mingles a description of them with one of participants in projects for other population segments. The women did have somewhat more education and higher prior wages than Title I women but had still been concentrated in near minimum wage jobs.[95]

Assessments of these programs to date are clearer about their processes than about their long-run labor market effects. More than Title I respondents, the surveyed NPSPS women felt they had learned how to prepare for the job market; in each group, about two-thirds of those who had expected to get substantive skill training believed they "learned a great deal" about a specific field.[96] The survey findings about the differences between the Title I and the NPSPS program impacts on female wages are rather indefinite; it seems that the traditionally male training allowed more NPSPS women to get relatively higher-paying work (over $4 per hour, circa 1978), but that comparably large proportions of each group moved from very low (below $2.50 per hour) to middling-wage jobs. [97] Another, more anecdotal account of CETA model projects for women claims that nontraditional occupational preparation has proven feasible at several stages, namely recruitment, retention, job development and job placement. [98]

Summary

Surveying the record of federal vocational training for disadvantaged women, one finds some measure of hope that results can be achieved with careful targeting. WIN and CETA training has allowed several groups of women, particularly those with the least prior employment history, to move to somewhat higher-skilled and better-paid jobs. Those who entered the regular programs with a fair amount of entry-level work experience profited very little--not a surprising outcome, in view of the brief and elementary nature of typical WIN and CETA training. The small number of women given opportunity to train in longer, more difficult, and/or more male-dominant fields seem, on the whole, more eager and able to join the primary labor force, although the data are neither consistent nor complete. There is abundant evidence of high aspirations on the part of large segments of AFDC women. It is also clear, however, that to expand their earnings ability many welfare mothers need help to surmount obstacles other than lack of high-level skills.

94. Abt Associates. 1979a. New Approaches to CETA Training: an Overview of the Title III National Program for Selected Population Segments, pp.44-47, 63-66.

95. Abt Associates, 1979a, pp. 58, 70.

96. Abt Associates 1979a, pp. 61-63, 66.

97. Abt Associates, 1979b, pp. 69-70

98. U.S. National Commission for Employment Policy, 1981, pp. 118-23.

None of the programs here discussed has fully tested the potential of training under optimal conditions. One or more aspects of each appears helpful, if not crucial, but no program has combined them all. This research review will therefore conclude with a summary of evidence on these promising features: skill level and duration of training; field of training; mode of training; auxiliary program elements; and the importance of local elements.

Skill level and duration of training. To develop new skills and welfare independence, most AFDC recipients need higher-than-entry level skill training for longer periods than half a year. Failure to offer this level of training explains why WIN and CETA affected post-training wage rates and extent of welfare dependency so much less than hours worked. The provision of appreciably longer and/or more difficult training courses accounts in part for the successes of many supported work and STIP clients and of a few voucher users. Longer participation alone helped certain WIN youth and CETA women. How duration affects later earnings is unclear; longer stays may signify more skill attainment, higher passing credentials thresholds, or simply more exposure to any or all program features.

Field of training. Selection of the occupations for which female trainees prepare, irrespective of skill levels, matters a great deal for two basic and obvious reasons: traditional "men's jobs" usually pay higher wages, all things being equal, than female-segregated ones, and local labor market needs vary widely across occupations. Many female participants in CETA's Title I/II BC and in its NPSPS projects aspired to gender-neutral or predominantly male jobs; the moderately greater earnings impact of these projects must be partly attributed to their training of women in fields that fit these aspirations. Those regular CETA graduates in Boston who ended up in training-related or high-demand fields kept their jobs longer. STIP participants, so placed by design, enjoyed better than the usual CETA placement rates and entry wages.

To the extent that existing laws banning sex discrimination in hiring and payment practices are being enforced, the sex segregation problem may have abated somewhat; should equal pay for comparably skilled work become the rule, it would shrink much further. The problem of variant labor market demands, on the other hand, looms ever larger as many blue-collar, male-dominated industries lose ground to new technology or move to new geographic regions. Most crucial for future trainees is the acquisition of high-level skills in high-demand fields, regardless of gender dominance.

Mode of training. To determine the relative merits of classroom study, on-the-job training, and subsidized work as teaching modes, becomes more difficult the longer one surveys the evidence. In general, classroom training seems more productive for women than for men; this was shown in the MDTA and WIN I programs. Subsidized work training was most useful for all but the least advantaged women in WIN II. Women in CETA who had trained in classrooms rather than on jobs enjoyed roughly equal, but more lasting, earnings gains. PSE was as good or better than classroom training for women, in general, and for higher prior earners. Mode of training as reflected by CETA component seems to make little difference for either sex, if one disregards PSE and looks for solid

long-run effects. The analyst's problem is that program components have usually been associated with differing levels of placement efforts and fields of training. STIP led to the discovery that OJT, per se, was not so critical an element as had been believed, once prior arrangements with employers had been made and men and women had attained high-demand skills in classrooms. Supported work, on the other hand appears to have used OJT to good advantage for an ill-prepared segment of the labor force. The only safe general judgment about teaching mode is that it should probably be appropriate to the field and the client's initial abilities.

Auxiliary program elements. Remedial education, placement aid and sundry "supportive services" have seemed on the whole to be necessary though not sufficient causes of success for welfare recipients in skill training activities. To participate in training, as well as eventually take full-time jobs, WIN women often need provisions for child care, financial emergencies, transportation, and health care. Well-coordinated relations between the WIN and social services staffs are mentioned as a hallmark of the best-managed projects. Intense, pre-planned, and varied extras characterize these WIN sites, as well as the successful supported work and many NPSPS projects. Job development and job-search aid are common program features generally believed effective; the more recent WIN record suggests that they don't, of themselves, promote long-run earnings gains. To some extent OJT and PSE owe their efficacy to direct placement aid; and virtually guaranteed jobs, as a corollary to training, have been recommended for WIN women and tried with early success for STIP participants.

The importance of local settings. Differences in local labor market conditions are sometimes cited as explanation of differing employment outcomes. For several programs--WIN I, WIN II, CETA, voucher experiments, STIP and NPSPS--evaluators are fairly sure that some important local variations in mix, intensity or quality of services exist; they are generally not yet sure about the nature of these differences or the size of their impact.

The related literature bodes well for the success of a program designed, as was the Chicago-Columbus demonstration, to give well qualified welfare mothers long-run, high-skill training in a field heretofore open mainly to men, provided that the field was well-chosen for the local economy, the support services and placement effort adequate, and the overall program well-managed. At the same time, there is enough evidence from earlier training efforts to suggest that success be defined in modest terms: none of the programs examined here resulted in welfare independence for the majority of participants. Successful outcomes for some fraction of a welfare population is the realistic yardstick by which new programs should be judged.